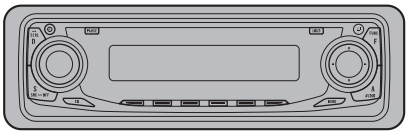
Pioneer sound.vision.soul

Service Manual



DEH-P26/XM/UC

ORDER NO.
CRT3169

MULTI-CD CONTROL HIGH POWER CD PLAYER WITH FM/AM TUNER

DEH-P26/XM/UC
DEH-P2600/XM/UC
DEH-P2650/XM/ES

This service manual should be used together with the following manual(s):

Model No.	Order No.	Mech.Module	Remarks
CX-3110	CRT3178	S10.1	CD Mech. Module:Circuit Description, Mech. Description, Disassembly

For details, refer to "Important symbols for good services".

PIONEER CORPORATION 4-1, Meguro 1-chome, Meguro-ku, Tokyo 153-8654, Japan
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PIONEER EUROPE NV Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 253 Alexandra Road, #04-01, Singapore 159936

K-ZZW. NOV. 2003 printed in Japan

SAFETY INFORMATION

CAUTION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.
Health & Safety Code Section 25249.6 - Proposition 65

● CD Player Service Precautions

1. Before disassembling the unit, be sure to turn off the power. Unplugging and plugging the connectors during power-on mode may damage the ICs inside the unit.
2. To protect the pickup unit from electrostatic discharge during serviving, take an appropriate treatment(shorting-solder) by referring to "the DISASSEMBLY" on page 50.
3. After replacing the pickup unit, be sure to check the grating.(See p.46.)

[Important symbols for good services]
In this manual, the symbols shown-below indicate that adjustments, settings or cleaning should be made securely.
When you find the procedures bearing any of the symbols, be sure to fulfill them:

1. Product safety

You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.

2. Adjustments

To keep the original performances of the product, optimum adjustments or specification confirmation is indispensable. In accordance with the procedures or instructions described in this manual, adjustments should be performed.

3. Cleaning

For optical pickups, tape-deck heads, lenses and mirrors used in projection monitors, and other parts requiring cleaning, proper cleaning should be performed to restore their performances.

4. Shipping mode and shipping screws

To protect the product from damages or failures that may be caused during transit, the shipping mode should be set or the shipping screws should be installed before shipping out in accordance with this manual, if necessary.

5. Lubricants, glues, and replacement parts

Appropriately applying grease or glue can maintain the product performances. But improper lubrication or applying glue may lead to failures or troubles in the product. By following the instructions in this manual, be sure to apply the prescribed grease or glue to proper portions by the appropriate amount.For replacement parts or tools, the prescribed ones should be used.

COMPACT disc DIGITAL AUDIO

CONTENTS

1. SPECIFICATIONS

● DEH-P26/XM/UC, DEH-P2600/XM/UC

General

Power source ..... 14.4 V DC (10.8 – 15.1 V allowable)
Grounding system ..... Negative type
Max. current consumption
..... 10.0 A
Backup current ..... 5 mA or less

Dimensions (W × H × D):
DIN
Chassis ..... 178 × 50 × 157 mm (7 × 2 × 6-1/8 in.)
Nose ..... 188 × 58 × 19 mm (7-3/8 × 2-1/4 × 3/4 in.)
D
Chassis ..... 178 × 50 × 162 mm (7 × 2 × 6-3/8 in.)
Nose ..... 170 × 46 × 14 mm (6-3/4 × 1-3/4 × 1/2 in.)
Weight ..... 1.4 kg (3 lbs)

Audio

Continuous power output is 22 W per channel minimum into 4 ohms, both channels driven 50 to 15,000 Hz with no more than 5% THD.
Maximum power output ..... 50 W × 4
Load impedance ..... 4 Ω (4 – 8 Ω allowable)
Preout max output level/output impedance
..... 2.2 V/1 kΩ
Equalizer (3-Band Parametric Equalizer):
Low
Frequency ..... 40/80/100/160 Hz
Q Factor ..... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
Gain ..... ±12dB
Mid
Frequency ..... 200/500/1k/2k Hz
Q Factor ..... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
Gain ..... ±12dB
High
Frequency ..... 3.15k/8k/10k/12.5k Hz
Q Factor ..... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
Gain ..... ±12dB
Loudness contour
Low ..... +3.5 dB (100 Hz), +3 dB (10 kHz)
Mid ..... +10 dB (100 Hz), +6.5 dB (10 kHz)
High ..... +11 dB (100 Hz), +11 dB (10 kHz)
(volume: –30 dB)

CD player

System ..... Compact disc audio system
Usable discs ..... Compact disc
Signal format:
Sampling frequency ..... 44.1 kHz
Number of quantization bits
..... 16; linear
Frequency characteristics ... 5 – 20,000 Hz (±1 dB)
Signal-to-noise ratio ..... 94 dB (1 kHz) (IHF-A network)
Dynamic range ..... 92 dB (1 kHz)
Number of channels ..... 2 (stereo)

FM tuner

Frequency range ..... 87.9 – 107.9 MHz
Usable sensitivity ..... 8 dBf (0.7 μV/75 Ω, mono, S/N: 30 dB)
50 dB quieting sensitivity ..... 10 dBf (0.9 μV/75 Ω, mono)
Signal-to-noise ratio ..... 75 dB (IHF-A network)
Distortion ..... 0.3 % (at 65 dBf, 1 kHz, stereo)
0.1 % (at 65 dBf, 1 kHz, mono)
Frequency response ..... 30 – 15,000 Hz (±3 dB)
Stereo separation ..... 45 dB (at 65 dBf, 1 kHz)
Selectivity ..... 80 dB (±200 kHz)
Three-signal intermodulation (desired signal level)
..... 30 dBf (two undesired signal level: 100 dBf)

AM tuner

Frequency range ..... 530 – 1,710 kHz (10 kHz)
Usable sensitivity ..... 18 μV (S/N: 20 dB)
Signal-to-noise ratio ..... 65 dB (IHF-A network)

Note

Specifications and the design are subject to possible modifications without notice due to improvements. ■

● **DEH-P2650/XM/ES**

General

Rated power source ..... 14.4 V DC (allowable voltage range: 12.0 – 14.4 V DC)
Grounding system ..... Negative type
Max. current consumption ..... 10.0 A

Backup current ..... 5 mA or less

Dimensions (W × H × D):
- DIN
  - Chassis ..... 178 × 50 × 157 mm
  - Nose ..... 188 × 58 × 19 mm
- D
  - Chassis ..... 178 × 50 × 162 mm
  - Nose ..... 170 × 46 × 14 mm

Weight ..... 1.4 kg

Audio

Continuous power output is 22 W per channel minimum into 4 ohms, both channels driven 50 to 15,000 Hz with no more than 5% THD.
Maximum power output ..... 50 W × 4
Load impedance ..... 4 Ω (4 – 8 Ω allowable)
Preout max output level/output impedance ..... 2.2 V/1 kΩ
Equalizer (3-Band Parametric Equalizer):
- Low
  - Frequency ..... 40/80/100/160 Hz
  - Q Factor ..... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
  - Gain ..... ±12dB
- Mid
  - Frequency ..... 200/500/1k/2k Hz
  - Q Factor ..... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
  - Gain ..... ±12dB
- High
  - Frequency ..... 3.15k/8k/10k/12.5k Hz
  - Q Factor ..... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
  - Gain ..... ±12dB

Loudness contour
- Low ..... +3.5 dB (100 Hz), +3 dB (10 kHz)
- Mid ..... +10 dB (100 Hz), +6.5 dB (10 kHz)
- High ..... +11 dB (100 Hz), +11 dB (10 kHz) (volume: –30 dB)

CD player

System ..... Compact disc audio system
Usable discs ..... Compact disc
Signal format:
- Sampling frequency ..... 44.1 kHz
- Number of quantization bits ..... 16; linear

Frequency characteristics ... 5 – 20,000 Hz (±1 dB)
Signal-to-noise ratio ..... 94 dB (1 kHz) (IEC-A network)
Dynamic range ..... 92 dB (1 kHz)
Number of channels ..... 2 (stereo)

FM tuner

Frequency range ..... 87.5 – 108.0 MHz
Usable sensitivity ..... 8 dBf (0.7 μV/75 Ω, mono, S/N: 30 dB)
50 dB quieting sensitivity ..... 10 dBf (0.9 μV/75 Ω, mono)
Signal-to-noise ratio ..... 75 dB (IEC-A network)
Distortion ..... 0.3 % (at 65 dBf, 1 kHz, stereo)
0.1 % (at 65 dBf, 1 kHz, mono)
Frequency response ..... 30 – 15,000 Hz (±3 dB)
Stereo separation ..... 45 dB (at 65 dBf, 1 kHz)

AM tuner

Frequency range ..... 531 – 1,602 kHz (9 kHz)
530 – 1,640 kHz (10 kHz)
Usable sensitivity ..... 18 μV (S/N: 20 dB)
Signal-to-noise ratio ..... 65 dB (IEC-A network)

Infrared remote control

Wavelength ..... 940 nm ±50 nm
Output ..... typ; 12 mw/sr per Infrared LED

Note

Specifications and the design are subject to possible modifications without notice due to improvements. ▣

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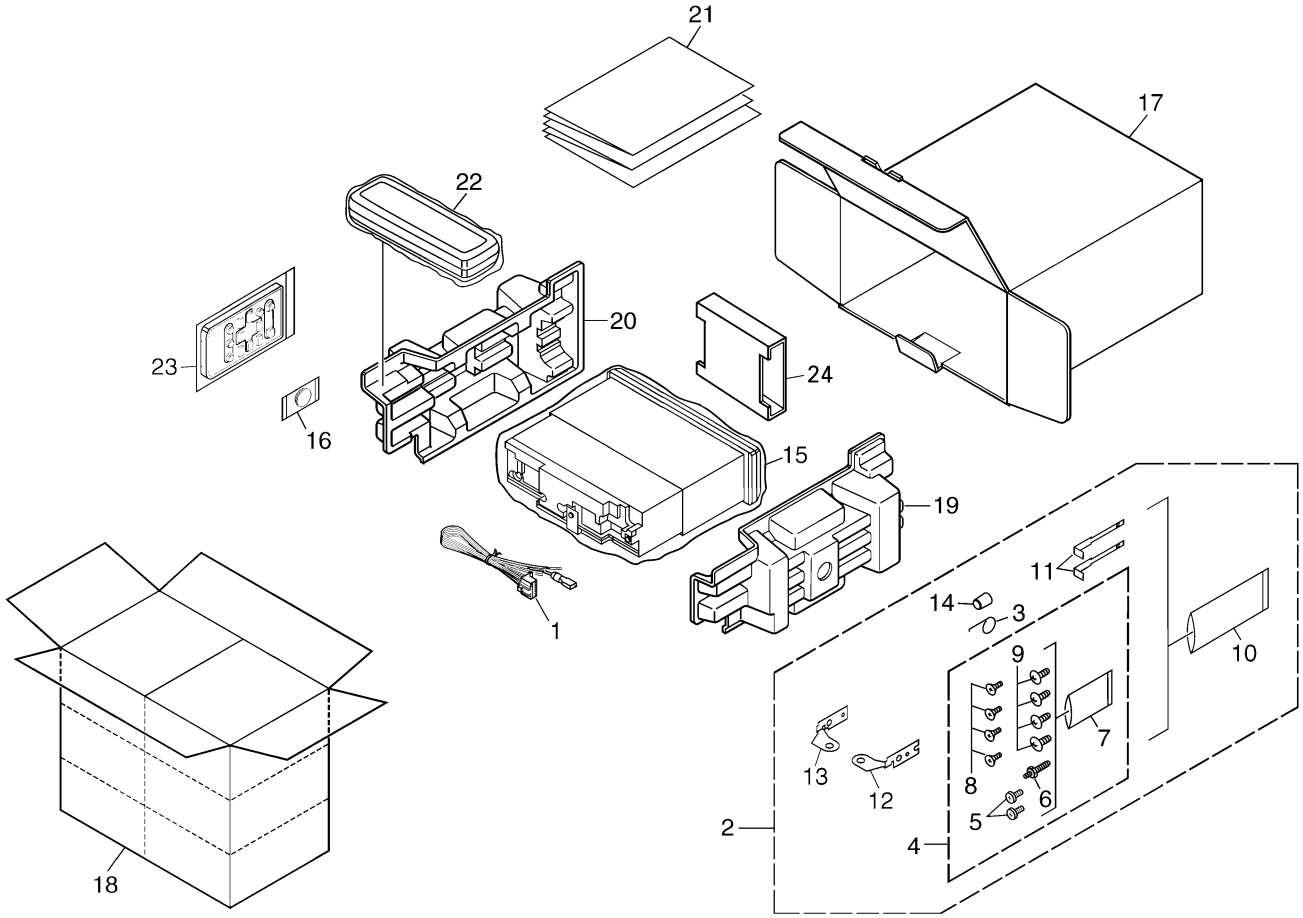
2. EXPLODED VIEWS AND PARTS LIST

*NOTES : • Parts marked by " * " are generally unavailable because they are not in our Master Spare Parts List.*
• Screw adjacent to ▽ mark on the product are used for disassembly.
• For the applying amount of lobricants or glue, follow the instructions in this manual.
(In the case of no amount instructions,apply as you think it appropriate.)

2.1 PACKING



(1) PACKING SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Cord Assy	CDE7060
	2	Accessory Assy	See Contrast table(2)
	3	Spring	CBH1650
	4	Screw Assy	See Contrast table(2)
	5	Fixing Screw	See Contrast table(2)
	6	Screw	CBA1650
*	7	Polyethylene Bag	CEG-127
	8	Screw	CRZ50P090FTC
	9	Screw	TRZ50P080FTC
*	10	Polyethylene Bag	CEG-158
	11	Handle	CNC5395
	12	Holder	See Contrast table(2)
	13	Holder	See Contrast table(2)
	14	Bush	CNV3930
	15	Polyethylene Bag	See Contrast table(2)
*	16	Battery	CEX1065
	17	Carton	See Contrast table(2)
	18	Contain Box	See Contrast table(2)
	19	Protector	CHP2663
	20	Protector	CHP2664
	21-1	Owner's Manual	See Contrast table(2)
	21-2	Owner's Manual	See Contrast table(2)
	21-3	Installation Manual	See Contrast table(2)
*	21-4	Warranty Card	See Contrast table(2)
*	21-5	Card	See Contrast table(2)
*	21-6	Caution Card	See Contrast table(2)
	22	Case Assy	See Contrast table(2)
	23	Remote Control Unit	CXC3173
	24	Inner Box	XHW7001

(2) CONTRAST TABLE

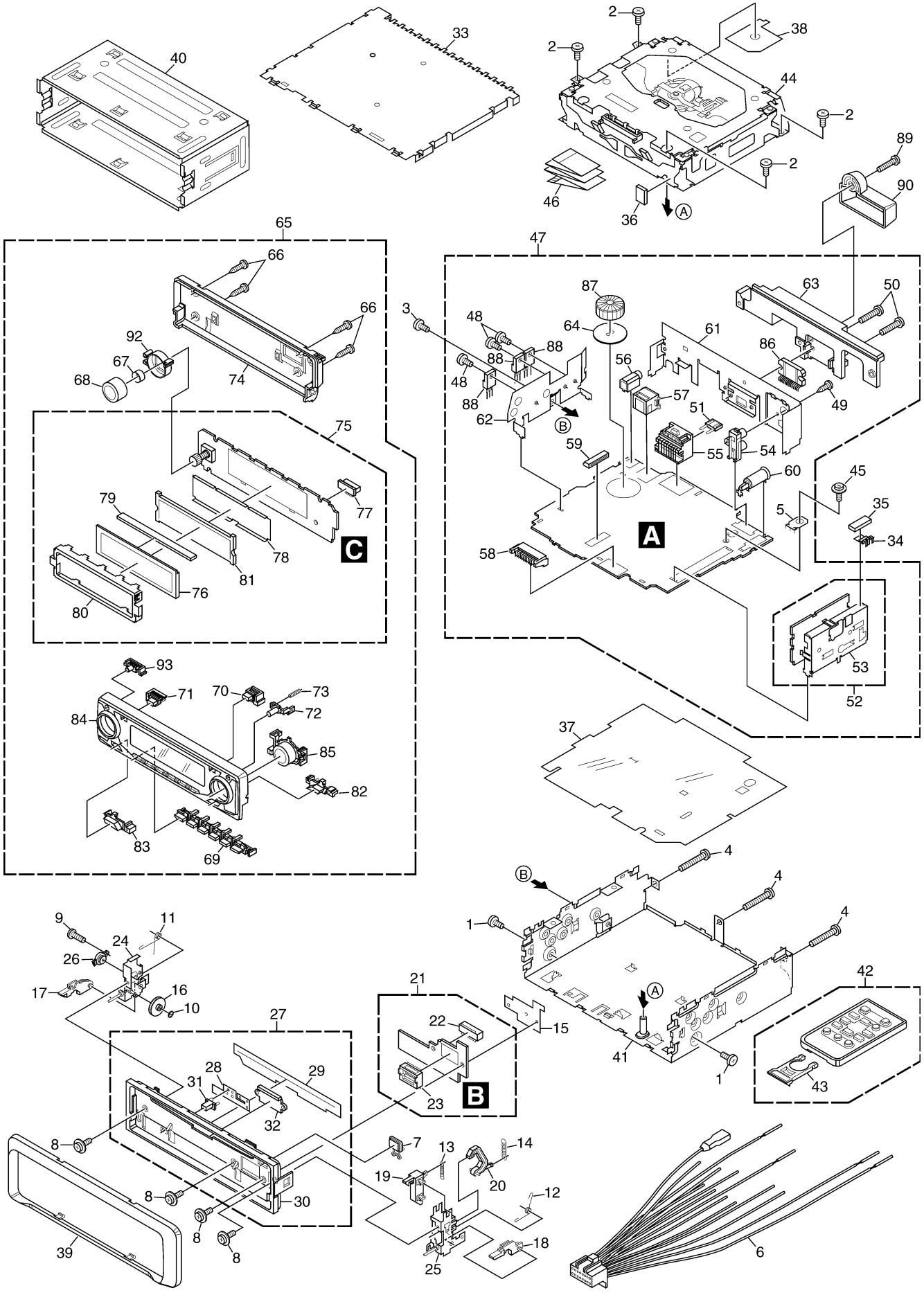
DEH-P26/XM/UC, DEH-P2600/XM/UC and DEH-P2650/XM/ES are constructed the same except for the following:

Mark No.	Symbol and Description	Parts No. DEH-P26/XM/UC	Parts No. DEH-P2600/XM/UC	Parts No. DEH-P2650/XM/ES
2	Accessory Assy	CEA3376	CEA3376	CEA3439
4	Screw Assy	CEA3848	CEA3848	CEA3849
5	Fixing Screw	BPZ20P060FZK	BPZ20P060FZK	Not used
12	Holder	CND1249	CND1249	Not used
13	Holder	CND1250	CND1250	Not used
15	Polyethylene Bag	CEG1173	CEG1173	CEG-162
17	Carton	XHG7020	XHG7019	XHG7017
18	Contain Box	XHL7020	XHL7019	XHL7017
21-1	Owner's Manual	XRD7038	XRD7038	XRD7032
21-2	Owner's Manual	Not used	Not used	XRD7033
21-3	Installation Manual	XRD7039	XRD7039	XRD7034
* 21-4	Warranty Card	CRY1070	Not used	Not used
* 21-5	Card	ARY1048	ARY1048	Not used
* 21-6	Caution Card	CRP1294	Not used	Not used
22	Case Assy	Not used	Not used	CXB3520

● Owner's Manual, Installation Manual

Model	Parts No.	Language
DEH-P26/XM/UC	XRD7038	English, French, Spanish
DEH-P2600/XM/UC	XRD7039	
DEH-P2650/XM/ES	XRD7032	English, Spanish, Portuguese(B)
	XRD7033	Arabic, Traditional Chinese
	XRD7034	English, Spanish, Portuguese(B), Arabic, Traditional Chinese

2.2 EXTERIOR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(1) EXTERIOR SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Screw	BMZ30P040FZK
	2	Screw	BSZ26P060FTC
	3	Screw	BSZ30P060FTC
	4	Screw	BSZ30P200FTC
	5	Terminal(CN402)	VNF1084
	6	Cord Assy	CDE7060
	7	Button(EJECT)	CAC7752
	8	Screw(M2x4.5)	CBA1647
	9	Screw(M2x4)	CBA1649
	10	Washer	CBF1038
	11	Spring	CBH2650
	12	Spring	CBH2651
	13	Spring	CBH2652
	14	Spring	CBH2653
	15	Holder	CND1254
	16	Gear	CNV5997
	17	Arm	CNV7400
	18	Arm	CNV7401
	19	Arm	CNV7402
	20	Arm	CNV7403
	21	Panel Unit	CWM8758
	22	Socket(CN1950)	CKS3550
	23	Connector(CN1951)	CKS4806
	24	Holder Unit	CXB9501
	25	Holder Unit	CXB9502
	26	Damper Unit	CXB9503
	27	Service Panel Unit	CXX1691
	28	Spring	CBL1512
	29	Cover	CNM6854
	30	Panel	CNS7245
	31	Pin	CNV6486
	32	Lighting Conductor	CNV6487
	33	Case	CNB2793
	34	Earth Plate	CNC8915
	35	Cushion	CNM8890
	36	Insulator	CNM7682
	37	Insulator	CNM7935
	38	Insulator	CNM8174
	39	Panel	See Contrast table(2)
	40	Holder Unit	CXB6681
	41	Chassis Unit	CXB9528
	42	Remote Control Unit	CXC3173
	43	Cover	CNS7068
	44	CD Mechanism Module(S10)	CXK5602
	45	Screw	ISS26P055FTC
	46	Cable	CDE7188
	47	Tuner Amp Unit	See Contrast table(2)
	48	Screw	ASZ26P060FTC
	49	Screw	BPZ26P080FTC
	50	Screw	BSZ26P160FTC
	51	Fuse(10A)	CEK1208
	52	FM/AM Tuner Unit	CWE1646
	53	Holder	CND1054
	54	Pin Jack(CN351)	See Contrast table(2)
	55	Plug(CN981)	CKM1376
	56	Connector(CN801)	See Contrast table(2)
	57	Connector(CN101)	CKS3408
	58	Plug(CN831)	CKS3537
	59	Connector(CN721)	CKS3835
	60	Antenna Jack(CN401)	CKX1056
	61	Holder	See Contrast table(2)
	62	Holder	CND1352
	63	Heat Sink	CNR1668
	64	Insulator	XNM7031
	65	Detachable Assy	See Contrast table(2)
	66	Screw	BPZ20P100FZK
	67	Spring	CBL1470
	68	Knob	See Contrast table(2)
	69	Button(1-6)	XAC7005
	70	Button(LOUD)	XAC7020
	71	Button(PAUSE)	XAC7019
	72	Button(OPEN)	See Contrast table(2)
	73	Spring	XBH7001
	74	Cover	XNS7013
	75	Keyboard Unit	See Contrast table(2)
	76	LCD(LCD1901)	See Contrast table(2)
	77	Connector(CN1901)	CKS4524
	78	Sheet	XNM7006
	79	Connector	XNV7006
	80	Holder	XNC7002
	81	Lighting Conductor	XNV7005
	82	Button(BAND)	XAC7021
	83	Button(EQ)	XAC7022
	84	Sub Grille Assy	See Contrast table(2)
	85	Sub Button Assy(SELECT)	See Contrast table(2)
	86	IC(IC301)	PAL007A
	87	Choke Coil(L981)	CTH1291
	88	Transistor(Q752,901,911)	2SD2375
	89	Screw	See Contrast table(2)
	90	Holder	See Contrast table(2)
	91	•••••	
*	92	Lighting Conductor	XNV7012
	93	Button(CLOCK)	See Contrast table(2)

(2) CONTRAST TABLE

DEH-P26/XM/UC, DEH-P2600/XM/UC and DEH-P2650/XM/ES are constructed the same except for the following:

Mark No.	Symbol and Description	Parts No. DEH-P26/XM/UC	DEH-P2600/XM/UC	DEH-P2650/XM/ES
39	Panel	XNS7070	XNS7070	CNS6935
47	Tuner Amp Unit	XWM7026	XWM7026	XWM7027
54	Pin Jack(CN351)	CKB1059	CKB1059	CKB1062
56	Connector(CN801)	CKS4124	CKS4124	Not used
61	Holder	CND1271	CND1271	CND1237
65	Detachable Assy	XXA7124	XXA7123	XXA7125
68	Knob	XAA7014	XAA7014	XAA7016
72	Button(OPEN)	XAC7012	XAC7012	XAC7026
75	Keyboard Unit	XWM7035	XWM7034	XWM7068
76	LCD(LCD1901)	CAW1760	CAW1759	CAW1764
84	Sub Grille Assy	XXA7139	XXA7138	XXA7140
85	Sub Button Assy(SELECT)	XXA7234	XXA7234	XXA7235
89	Screw	BMZ40P140FTC	Not used	Not used
90	Holder	CNV7619	Not used	Not used
93	Button(CLOCK)	XAC7024	XAC7024	XAC7016

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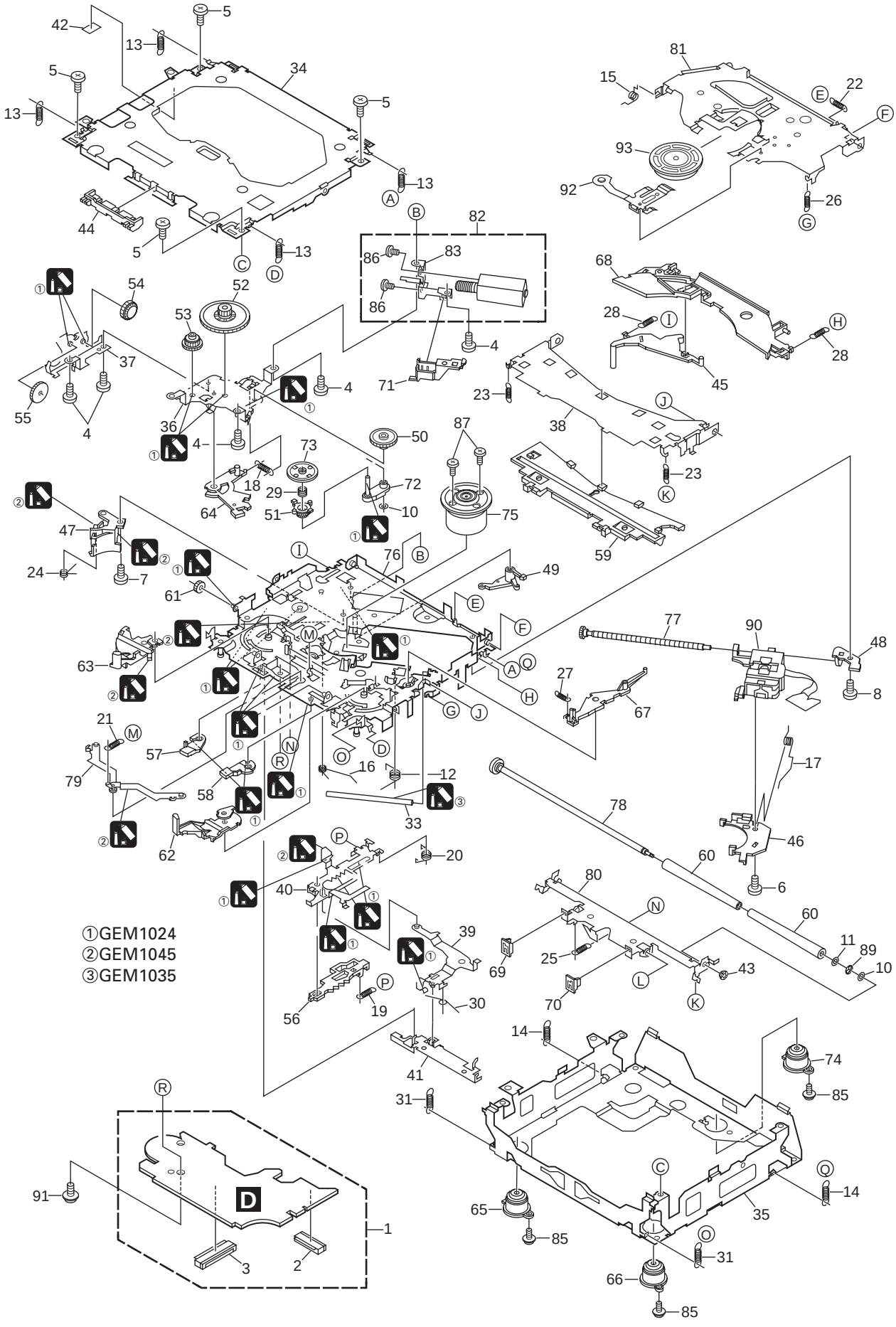
2.3 CD MECHANISM MODULE

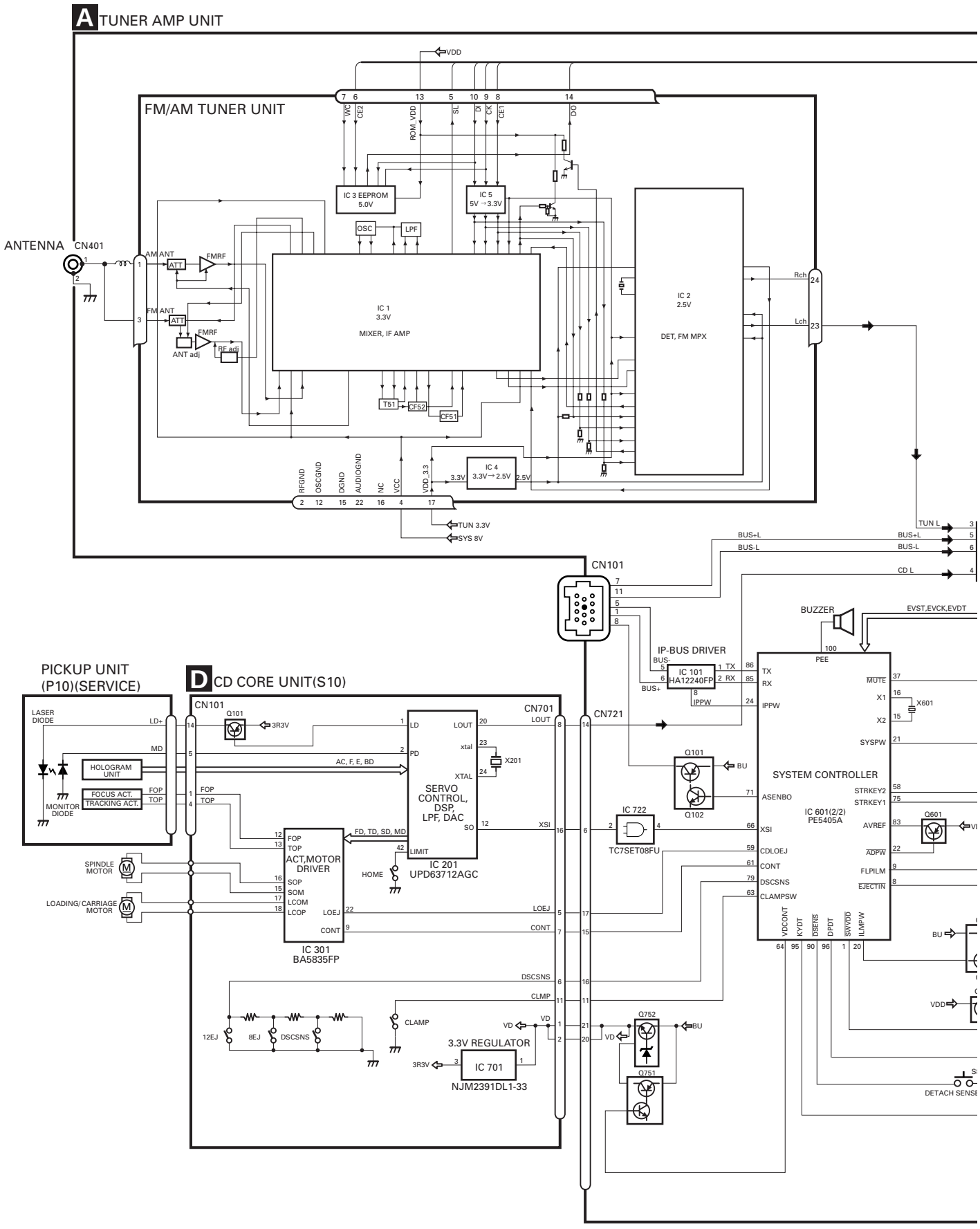


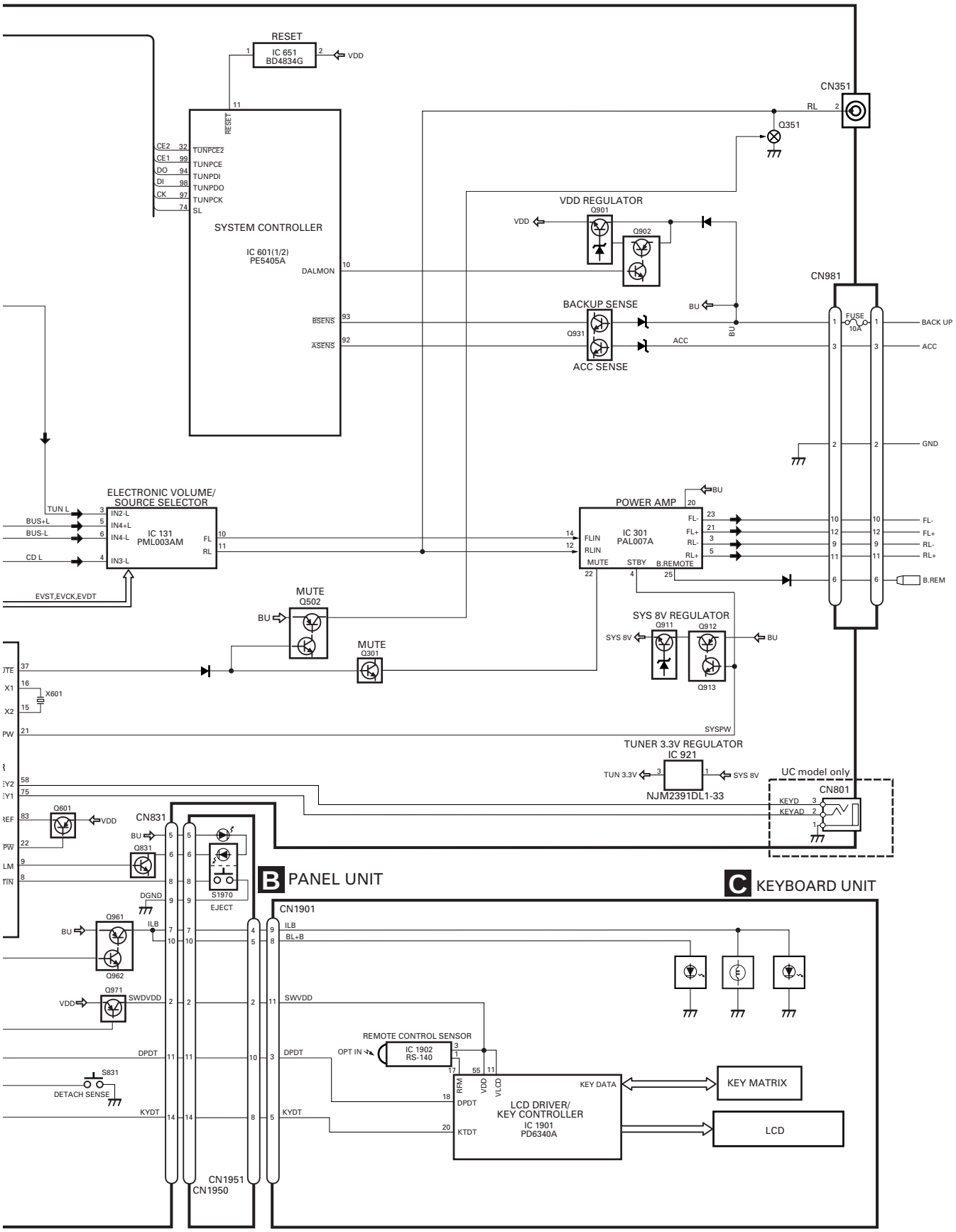
CD MECHANISM MODULE SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	CD Core Unit(S10)	CWX2947
	2	Connector(CN101)	CKS4182
	3	Connector(CN701)	CKS4188
	4	Screw	BMZ20P035FTC
	5	Screw	BSZ20P040FTC
	6	Screw(M2x4)	CBA1362
	7	Screw(M2x3)	CBA1511
	8	Screw(M2x3)	CBA1527
	9	•••••	
	10	Washer	CBF1038
	11	Washer	CBF1060
	12	Spring	CBH2390
	13	Spring	CBH2606
	14	Spring	CBH2607
	15	Spring	CBH2608
	16	Spring	CBH2609
	17	Spring	CBH2610
	18	Spring	CBH2735
	19	Spring	CBH2612
	20	Spring	CBH2613
	21	Spring	CBH2614
	22	Spring	CBH2615
	23	Spring	CBH2616
	24	Spring	CBH2617
	25	Spring	CBH2620
	26	Spring	CBH2621
	27	Spring	CBH2641
	28	Spring	CBH2642
	29	Spring	CBH2643
	30	Spring	CBH2659
	31	Spring	CBH2688
	32	•••••	
	33	Shaft	CLA4441
	34	Frame	CNC9962
	35	Frame	CNC9963
	36	Bracket	CNC9966
	37	Bracket	CND1895
	38	Arm	CNC9968
	39	Arm	CND1909
	40	Lever	CND2032
	41	Lever	CNC9984
	42	Sheet	CNM8134
	43	Collar	CNV7798
	44	Guide	CNV7799
	45	Arm	CNV7800
	46	Rack	CNV7199
	47	Holder	CNV7201
	48	Holder	CNV7202
	49	Arm	CNV7203
	50	Gear	CNV7207
	51	Gear	CNV7208
	52	Gear	CNV7209
	53	Gear	CNV7210
	54	Gear	CNV7211
	55	Gear	CNV7212
	56	Rack	CNV7214
	57	Arm	CNV7215
	58	Arm	CNV7216
	59	Guide	CNV7217
	60	Roller	CNV7218
	61	Gear	CNV7219
	62	Arm	CNV7221
	63	Arm	CNV7220
	64	Arm	CNV7222
	65	Damper	CNV7313
	66	Damper	CNV7314
	67	Arm	CNV7341
	68	Arm	CNV7342
	69	Guide	CNV7360
	70	Guide	CNV7361
	71	Holder	CNV7437
	72	Arm	CNV7805
	73	Gear	CNV7595
	74	Damper	CNV7618
	75	Motor Unit(M1)	CXB6007
	76	Chassis Unit	CXC2318
	77	Screw Unit	CXB8729
	78	Gear Unit	CXC2397
	79	Arm Unit	CXC2316
	80	Arm	CND1896
	81	Arm	CND1894
	82	Motor Unit(M2)	CXB8933
	83	Bracket	CNC9985
	84	•••••	
	85	Screw(M2x5)	EBA1028
	86	Screw	JFZ20P020FTC
	87	Screw	JGZ17P022FTC
	88	•••••	
	89	Washer	YE20FTC
	90	Pickup Unit(P10)(Service)	CXX1641
	91	Screw	IMS26P030FTC
	92	Spring	CBL1635
	93	Clamper	CNV7197

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

3.1 BLOCK DIAGRAM




RESET
IC 651
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SYSTEM CONTROLLER
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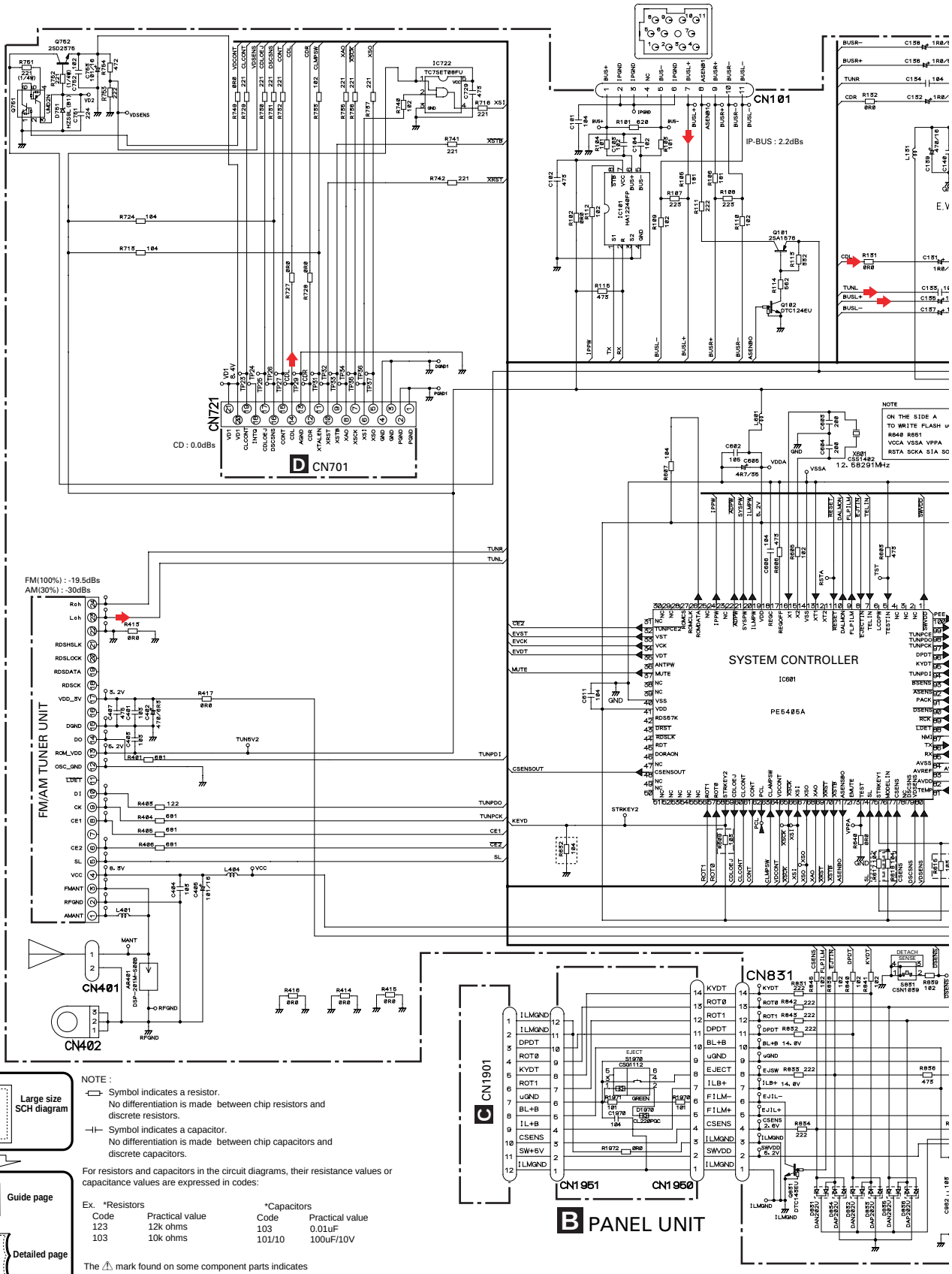
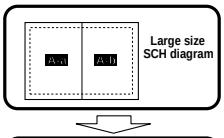
TUNPCE
TUNPDI
TUNPDO
TUNPCK
DALMON
BSENS
ASENS
CN351
RL
Q351
VDD REGULATOR
Q901
Q902
BACKUP SENSE
Q931
ACC SENSE
BU
ACC
CN981
FUSE
10A
BACK UP
GND
B.REM
ELECTRONIC VOLUME/
SOURCE SELECTOR
IC 131
PML003AM
TUN L
BUS+L
BUS-L
CD L
EVST,EVCK,EVDT
POWER AMP
IC 301
PAL007A
FLIN
RLIN
MUTE
STBY
B.REMOTE
MUTE
Q502
Q301
SYS 8V REGULATOR
Q911
Q912
Q913
SYS 8V
SYSPW
X601
TUNER 3.3V REGULATOR
IC 921
TUN 3.3V
NJM2391DL1-33
UC model only
CN801
KEYD
KEYAD
Q601
VDD
CN831
Q831
S1970
EJECT
DGND
Q961
Q962
ILB
Q971
SWDVDD
DPDT
S831
DETACH SENSE
KYDT
B PANEL UNIT
C KEYBOARD UNIT
CN1901
BL+B
SWVDD
REMOTE CONTROL SENSOR
IC 1902
RS-140
OPT IN
LCD DRIVER/
KEY CONTROLLER
IC 1901
PD6340A
KEY DATA
KEY MATRIX
LCD
CN1951
CN1950

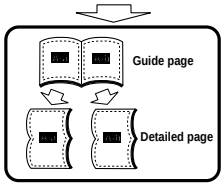
3.2 OVERALL CONNECTION DIAGRAM(GUIDE PAGE)

Note: When ordering service parts, be sure to refer to " EXPLODED VIEWS AND PARTS LIST" or "ELECTRICAL PARTS LIST".

A-a







A B

NOTE :

- Symbol indicates a resistor. No differentiation is made between chip resistors and discrete resistors.
- Symbol indicates a capacitor. No differentiation is made between chip capacitors and discrete capacitors.

For resistors and capacitors in the circuit diagrams, their resistance values or capacitance values are expressed in codes:

Ex. *Resistors

Code	Practical value
123	12k ohms
103	10k ohms

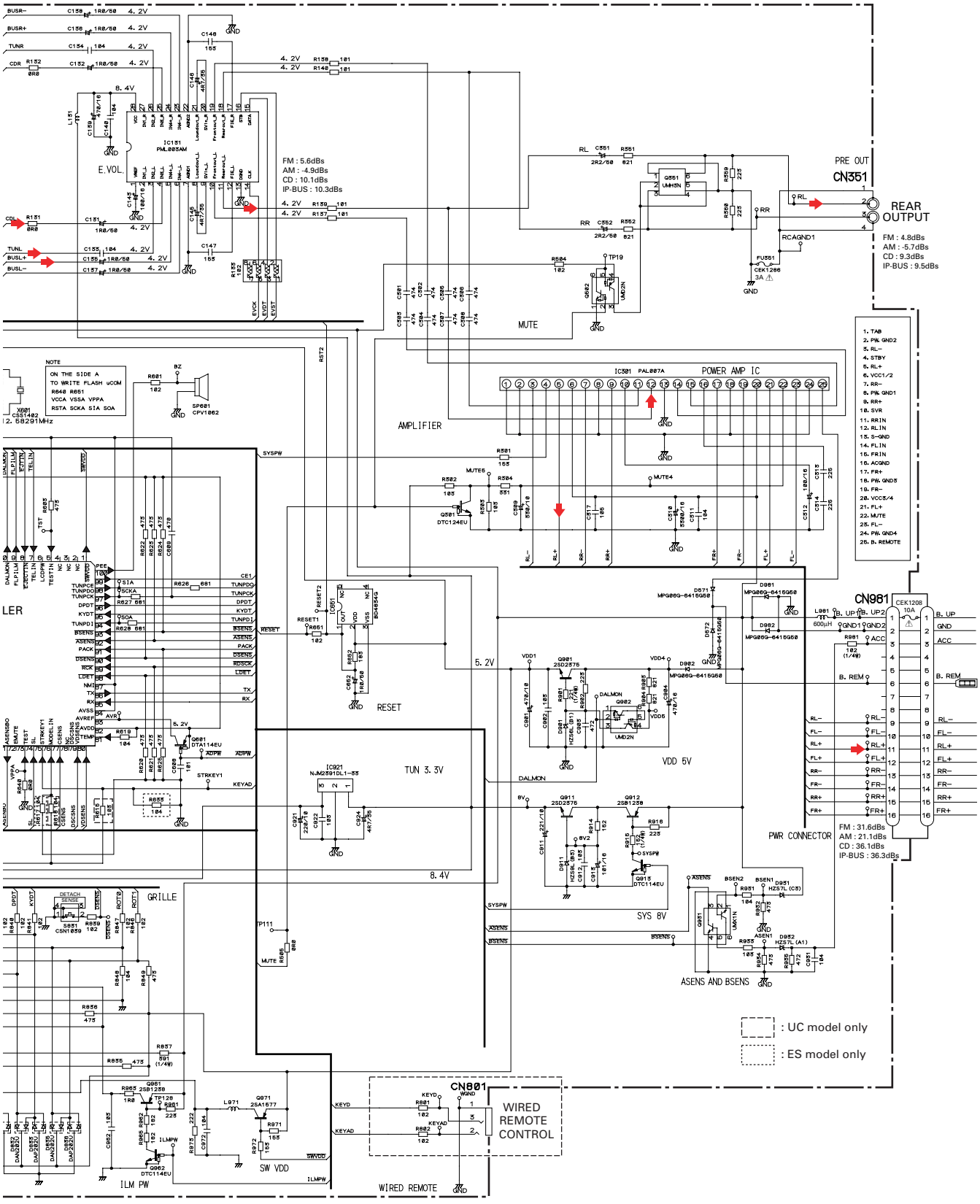
*Capacitors

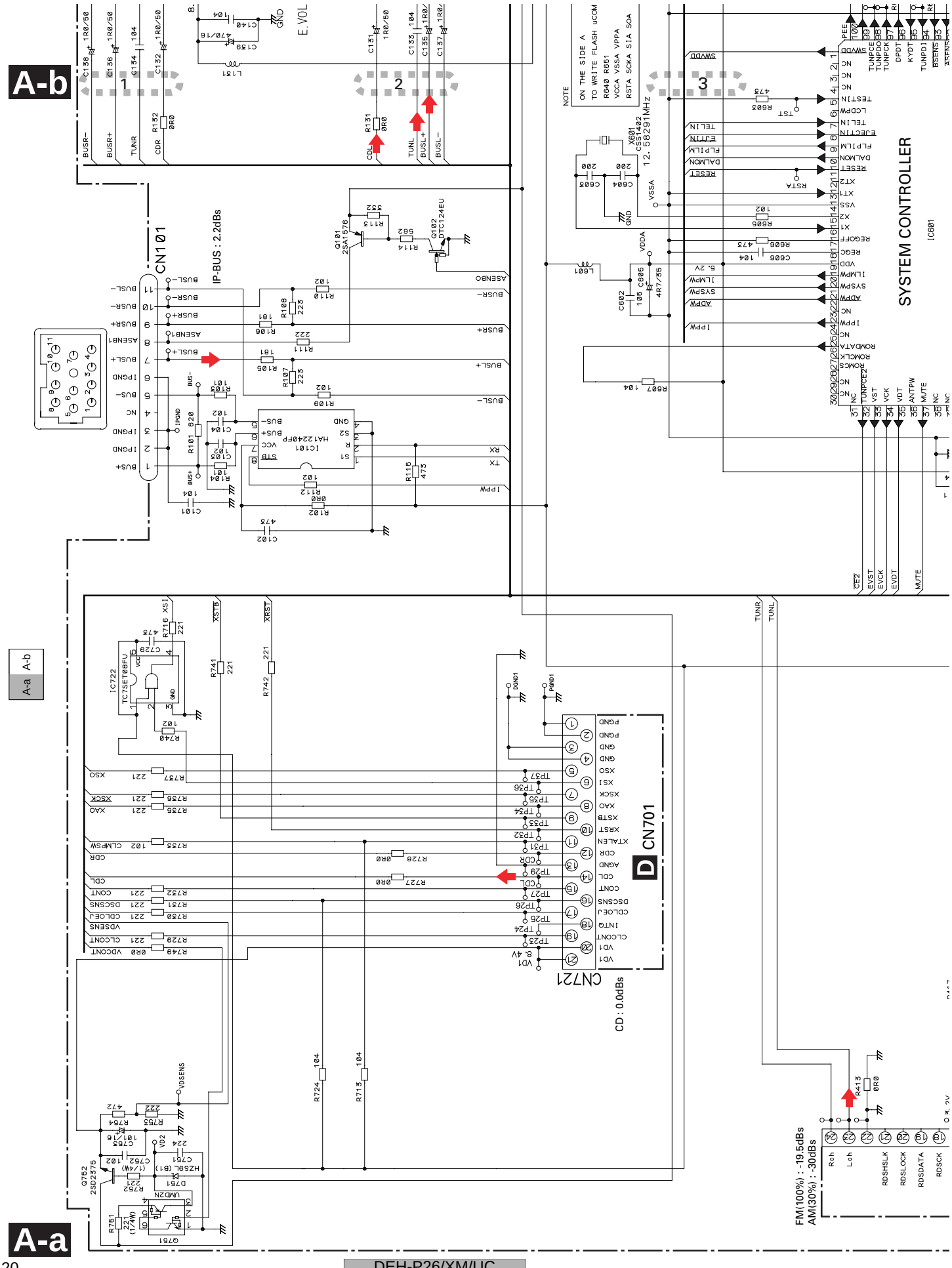
Code	Practical value
103	0.01uF
101/10	100uF/10V

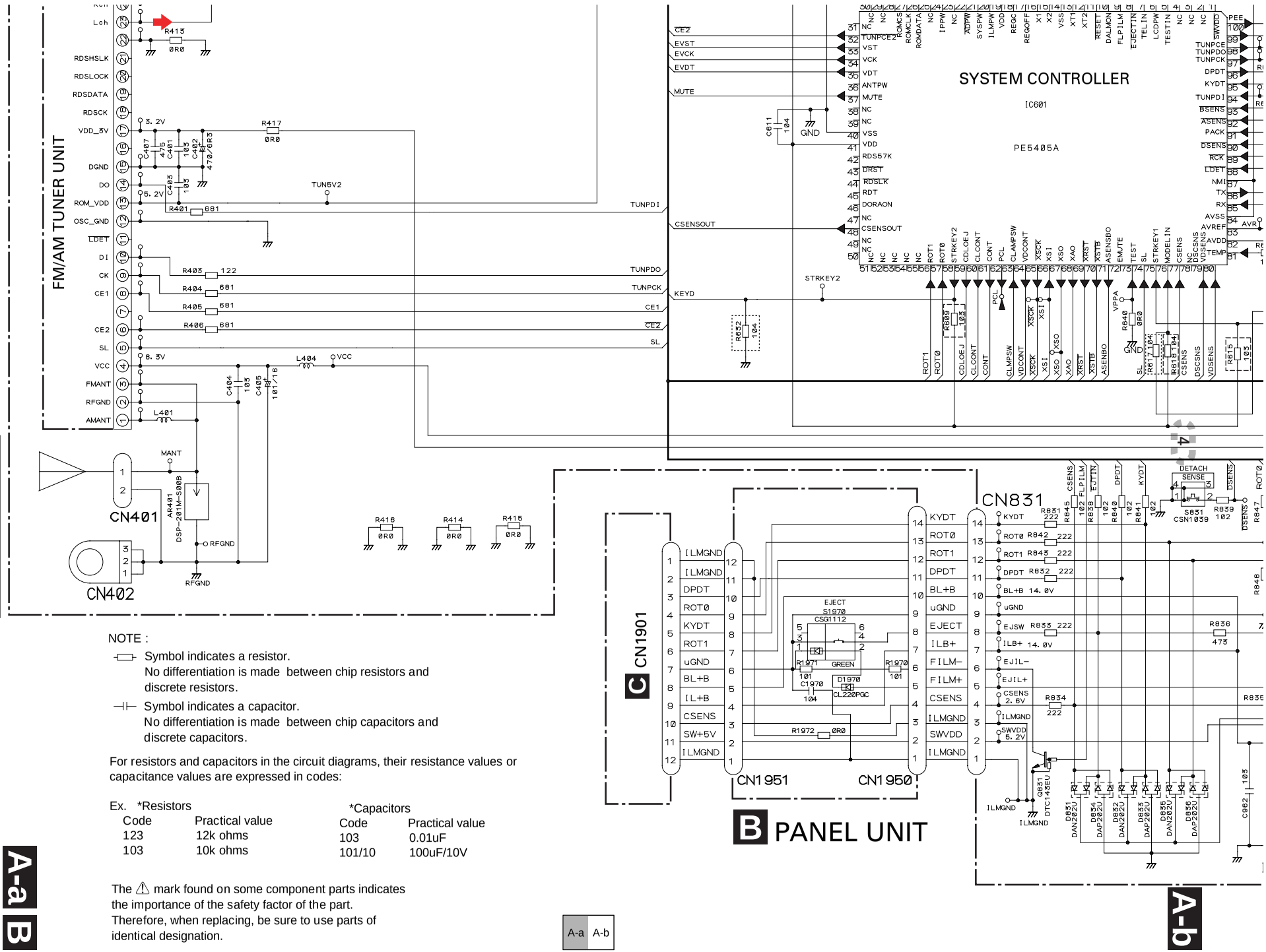
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

A-b

A TUNER AMP UNIT




A-b
A-a
SYSTEM CONTROLLER
IC601
CN1101
IP-BUS : 2.2dBs
CN701
CN721
CD : 0.0dBs
FM(100%) : -19.5dBs
AM(30%) : -30dBs
DEH-P26/XM/UC



NOTE :

- Symbol indicates a resistor.
  No differentiation is made between chip resistors and discrete resistors.
- Symbol indicates a capacitor.
  No differentiation is made between chip capacitors and discrete capacitors.

For resistors and capacitors in the circuit diagrams, their resistance values or capacitance values are expressed in codes:

Ex. *Resistors

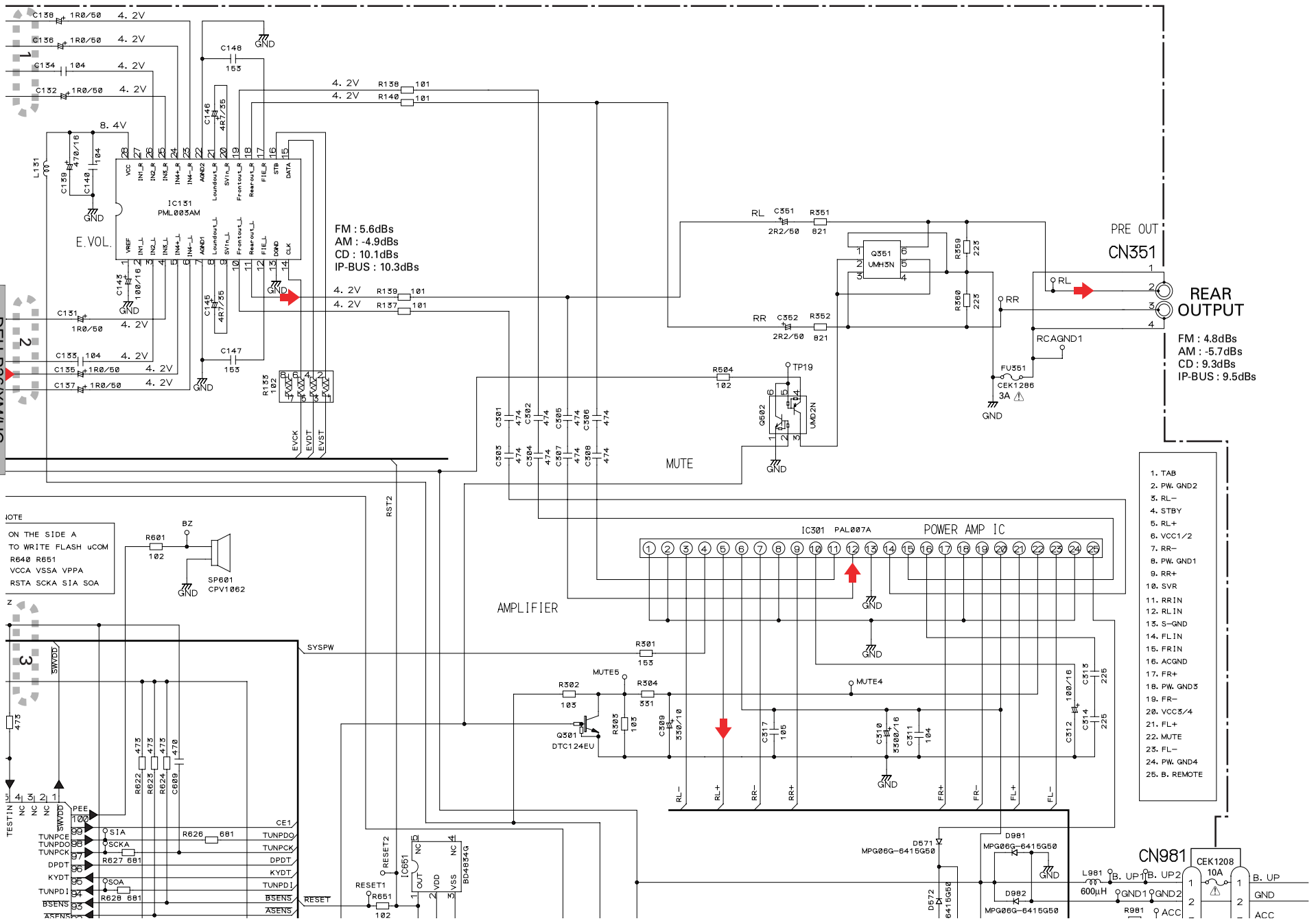
Code	Practical value
123	12k ohms
103	10k ohms

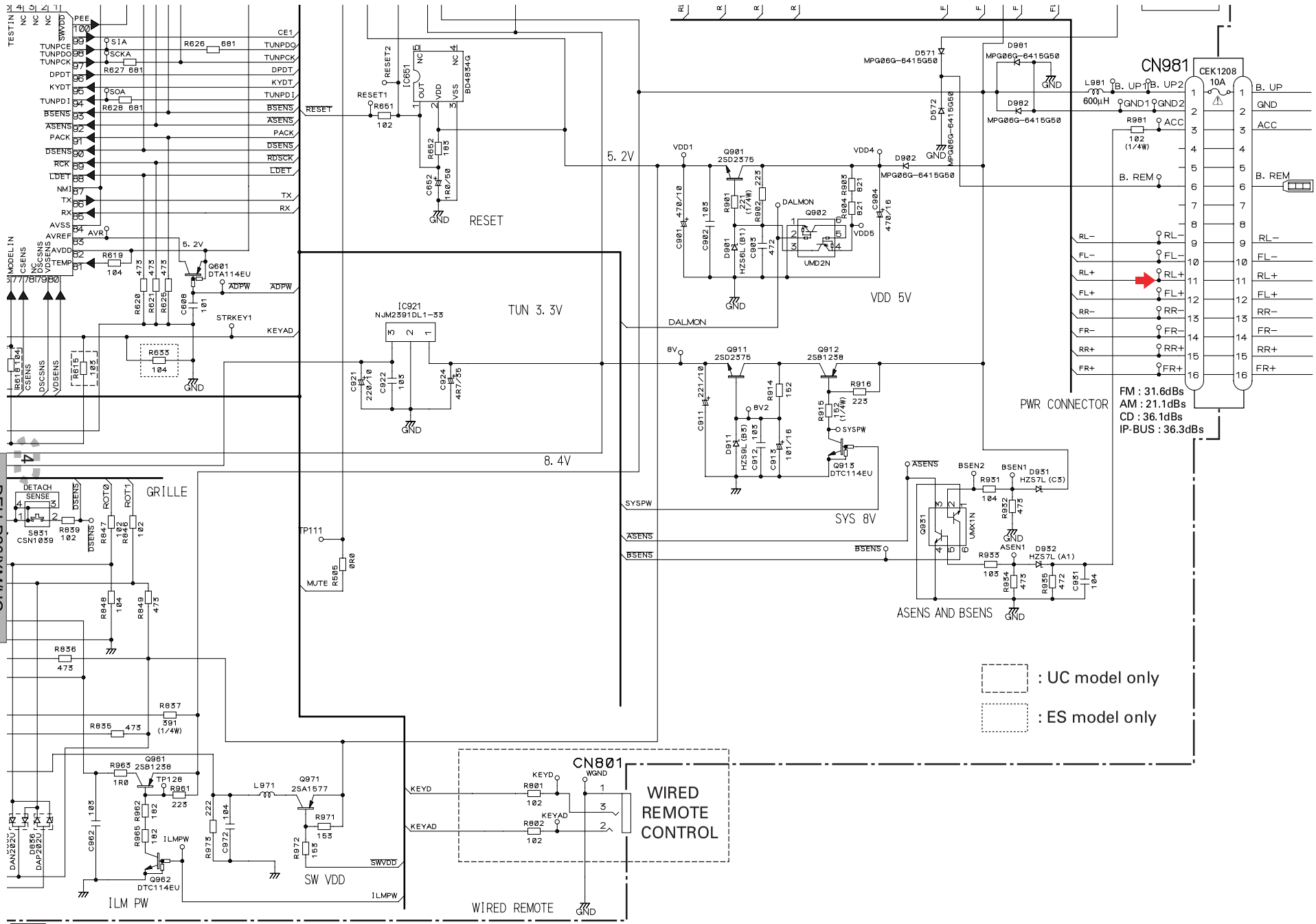
*Capacitors

Code	Practical value
103	0.01uF
101/10	100uF/10V

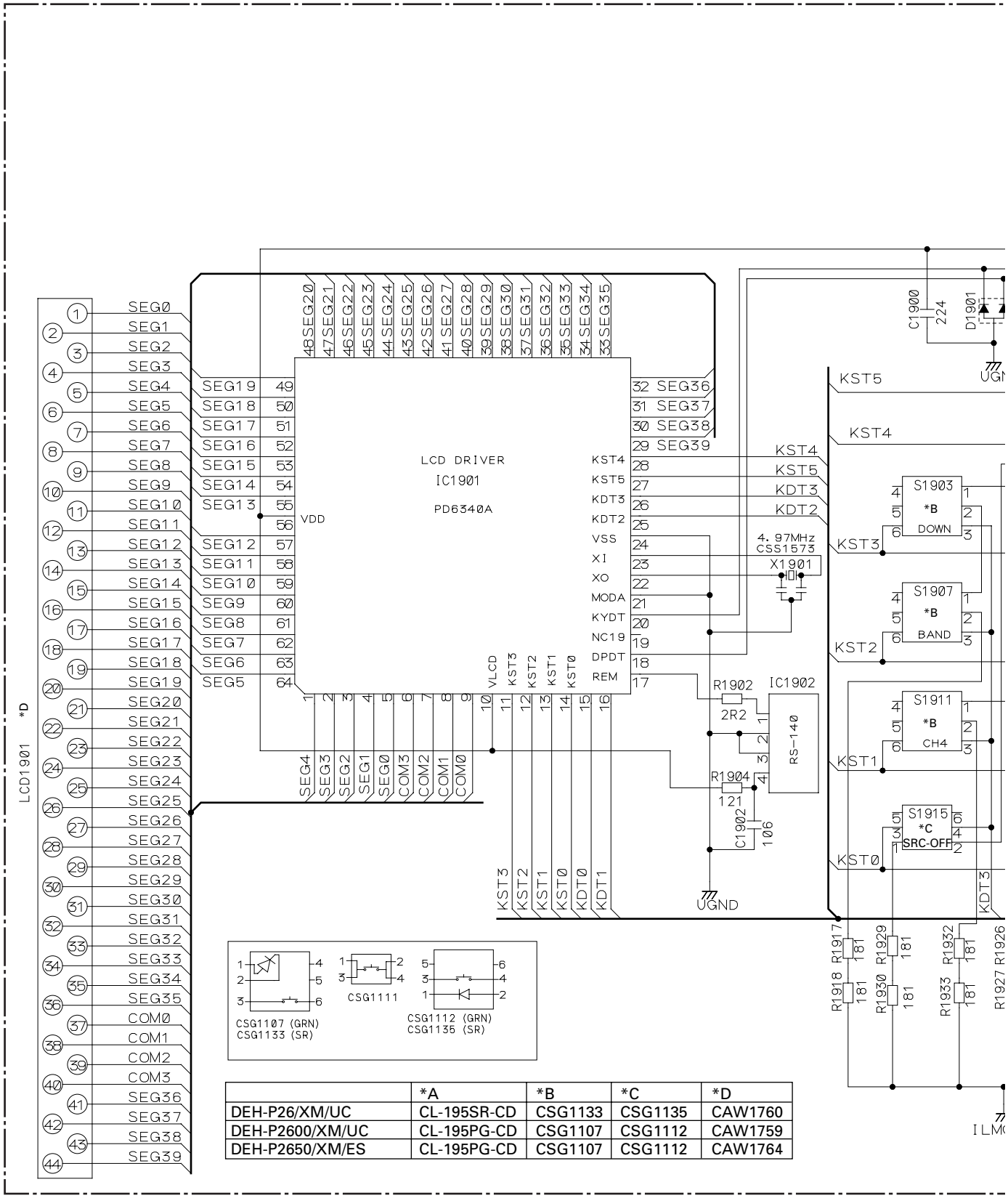
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

A TUNER AMP UNIT



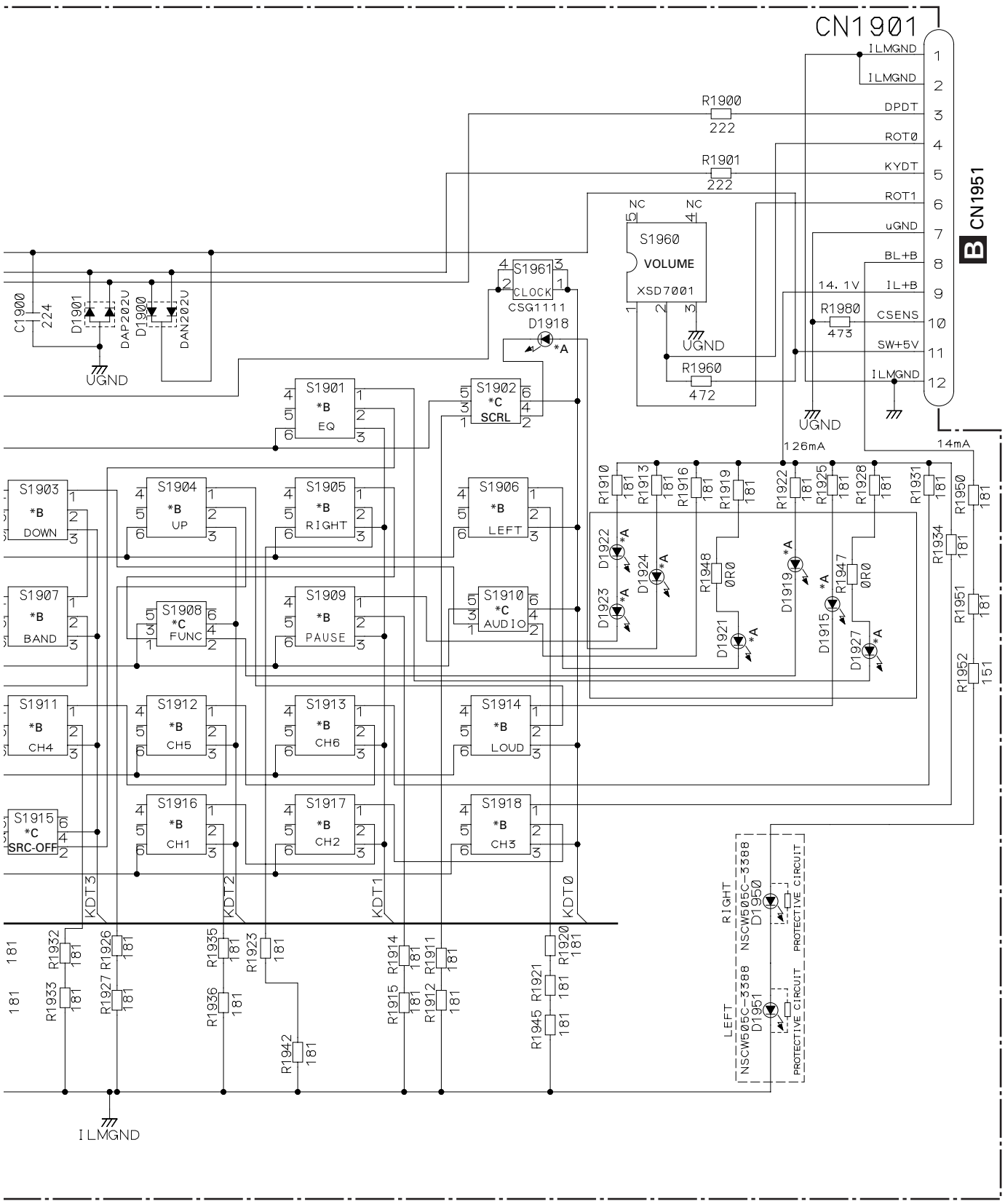

DEH-P26/XM/UC
GRILLE
RESET
TUN 3.3V
VDD 5V
SYS 8V
ASENS AND BSENS
PWR CONNECTOR
SW VDD
ILM PW
WIRED REMOTE
WIRED REMOTE CONTROL
CN981
CN801
5.2V
8.4V
8V
FM : 31.6dBs
AM : 21.1dBs
CD : 36.1dBs
IP-BUS : 36.3dBs
: UC model only
: ES model only
A-a
A-b

3.3 KEYBOARD UNIT

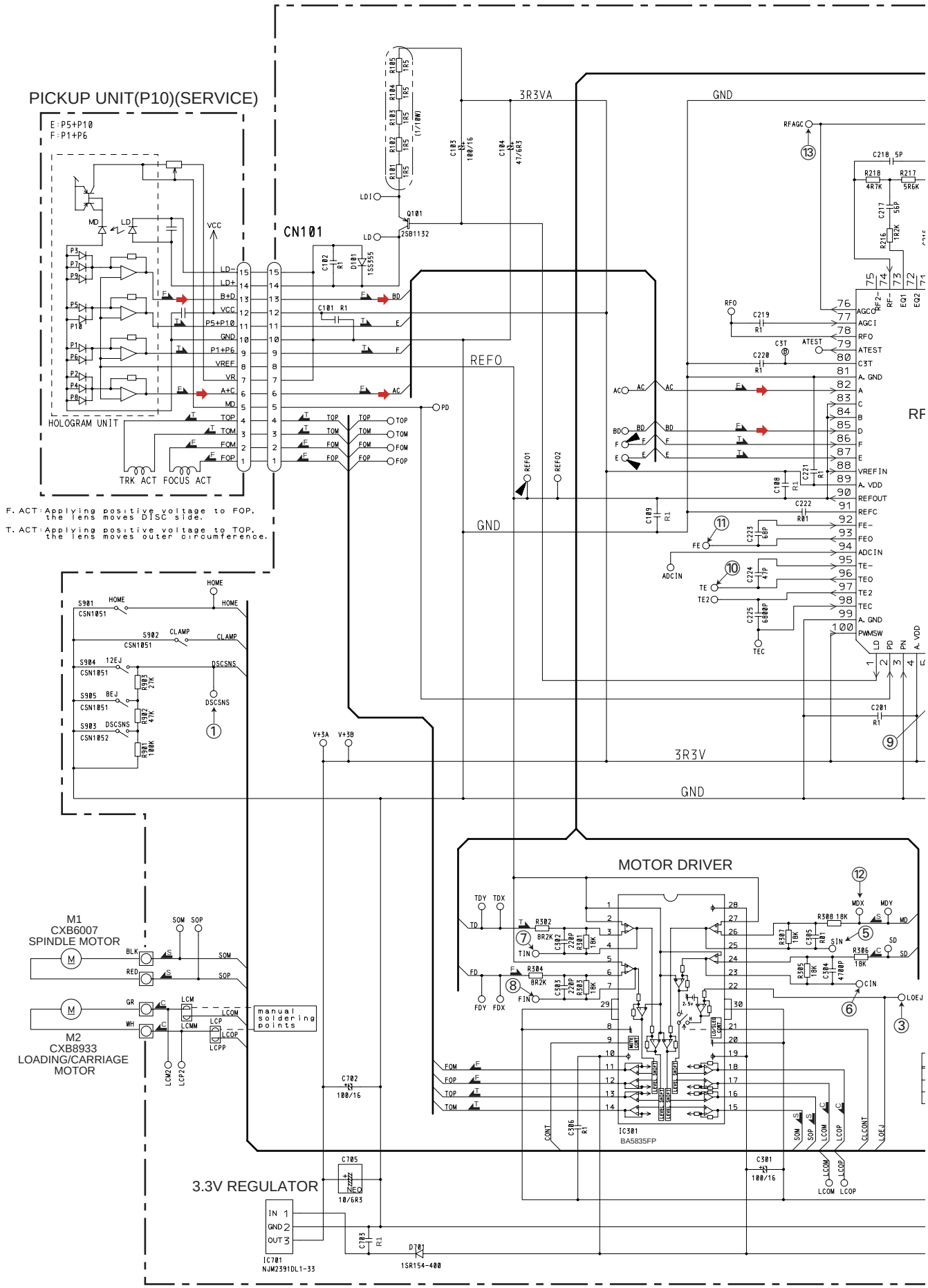


	*A	*B	*C	*D
DEH-P26/XM/UC	CL-195SR-CD	CSG1133	CSG1135	CAW1760
DEH-P2600/XM/UC	CL-195PG-CD	CSG1107	CSG1112	CAW1759
DEH-P2650/XM/ES	CL-195PG-CD	CSG1107	CSG1112	CAW1764

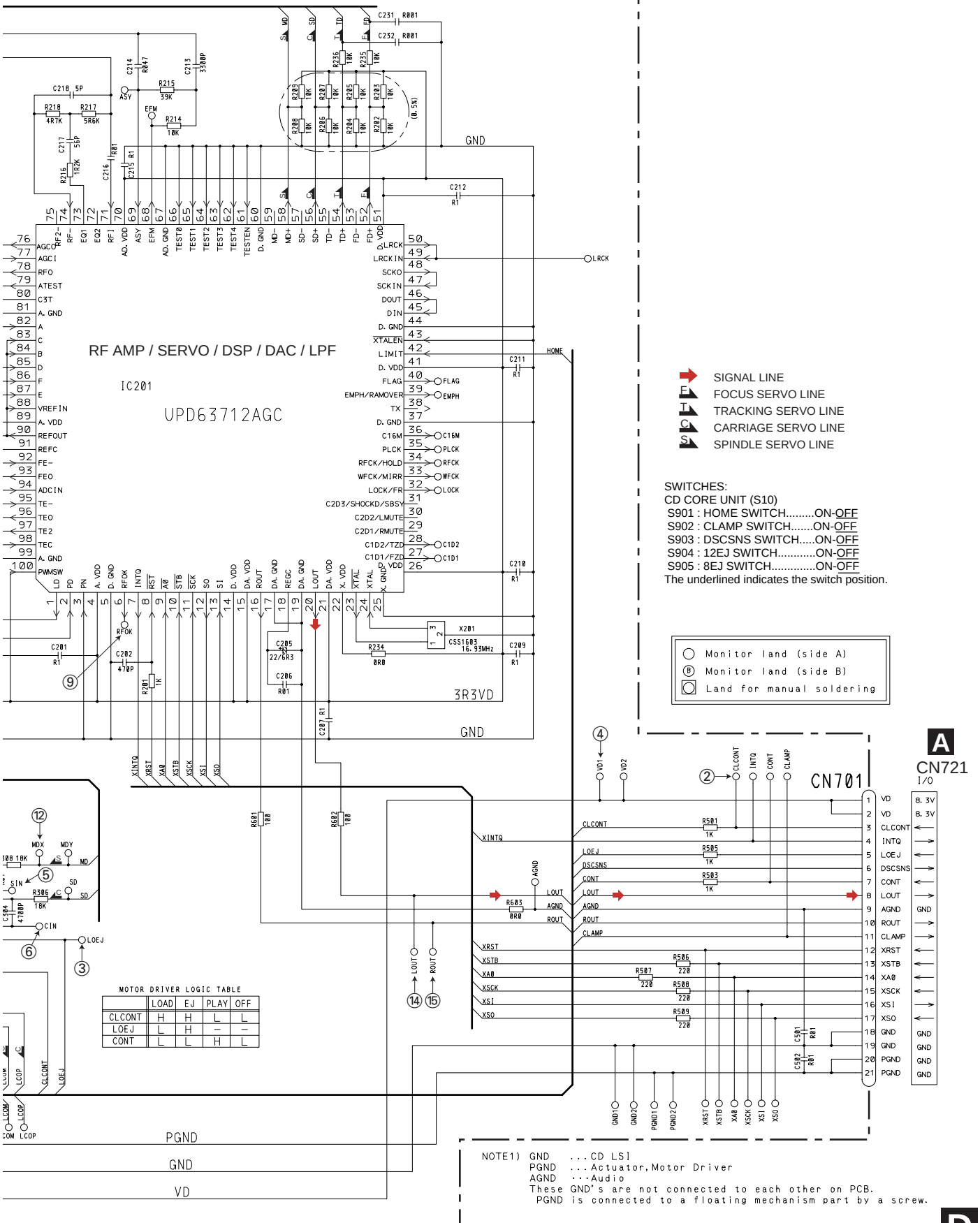
C KEYBOARD UNIT



3.4 CD MECHANISM MODULE



D CD CORE UNIT(S10)

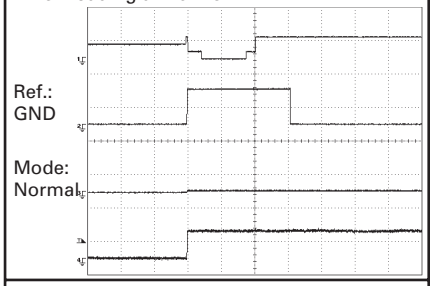


● Waveforms

Note : 1. The encircled numbers denote measuring points in the circuit diagram.
2. Reference voltage REFO1(1.65V)

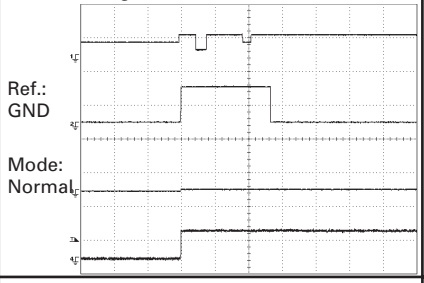
① DSCSNS 5V/div 500ms/div
② CLCONT 5V/div
③ LOEJ 5V/div
④ VD 10V/div

When loading a 12cm CD



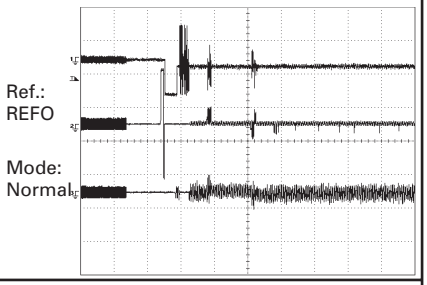
① DSCSNS 5V/div 500ms/div
② CLCONT 5V/div
③ LOEJ 5V/div
④ VD 10V/div

When loading an 8cm CD



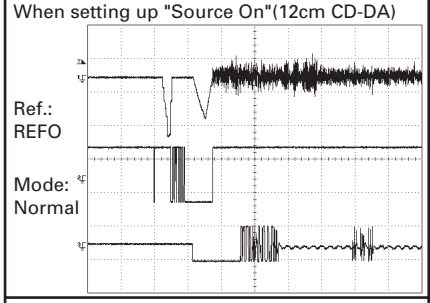
⑤ SIN 1V/div 2s/div
⑥ CIN 500mV/div
⑦ TIN 500mV/div

When setting up after loading a 12cm CD-DA disc



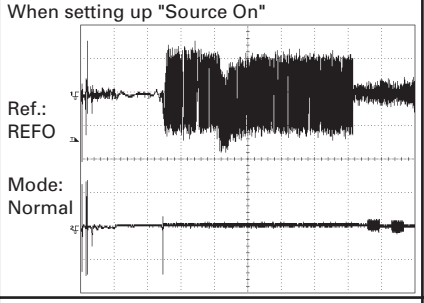
⑧ FIN 200mV/div 500ms/div
⑨ RFOK 2V/div
⑤ SIN 2V/div

When setting up "Source On"(12cm CD-DA)



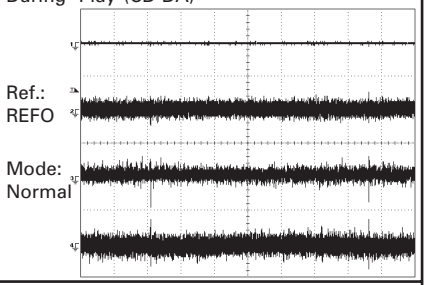
⑩ TE 500mV/div 200ms/div
⑪ FE 500mV/div

When setting up "Source On"



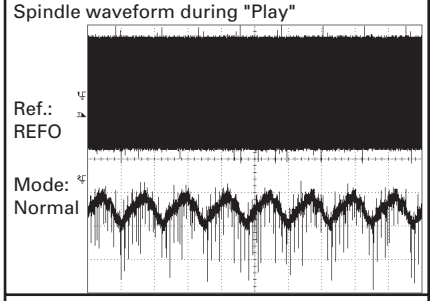
⑪ FE 500mV/div 20ms/div
⑧ FIN 500mV/div
⑩ TE 500mV/div
⑦ TIN 500mV/div

During "Play"(CD-DA)



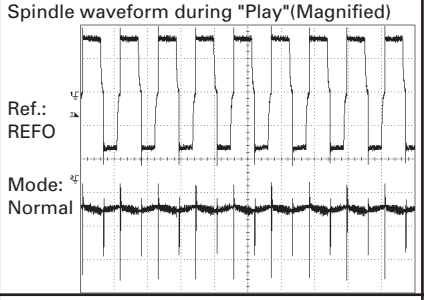
⑫ MDX 500mV/div 5ms/div
⑤ SIN 1V/div

Spindle waveform during "Play"



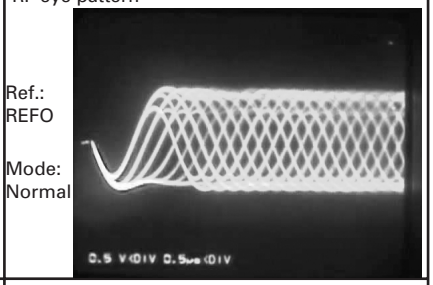
⑫ MDX 500mV/div 5µs/div
⑤ SIN 1V/div

Spindle waveform during "Play"(Magnified)



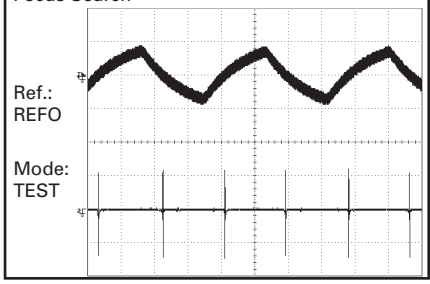
⑬ RFAGC 500mV/div 0.5µs/div

RF eye pattern



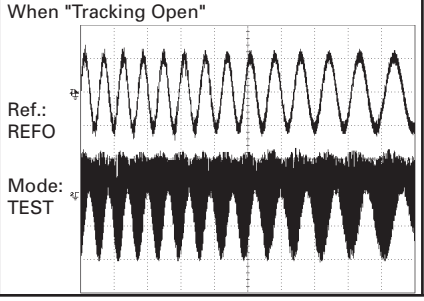
⑧ FIN 500mV/div 200ms/div
⑪ FE 500mV/div

Focus Search



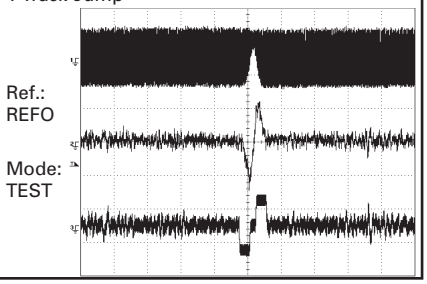
⑩ TE 500mV/div 2ms/div
⑬ RFAGC 500mV/div

When "Tracking Open"



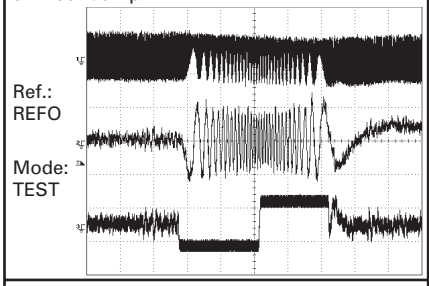
⑬ RFAGC 1V/div 500µs/div
⑩ TE 500mV/div
⑦ TIN 500mV/div

1 Track Jump



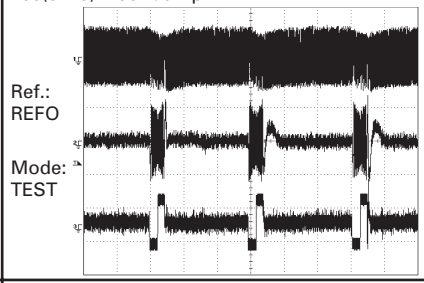
⑬ RFAGC 1V/div 500ms/div
⑩ TE 500mV/div
⑦ TIN 500mV/div

32 Track Jump



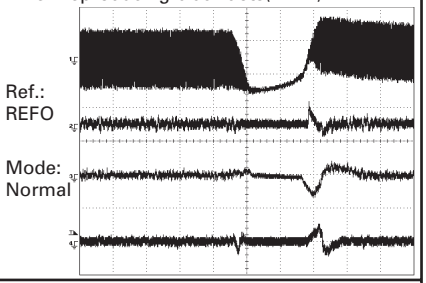
⑬ RFAGC 1V/div 5ms/div
⑩ TE 500mV/div
⑦ TIN 500mV/div

100(32x3) Track Jump



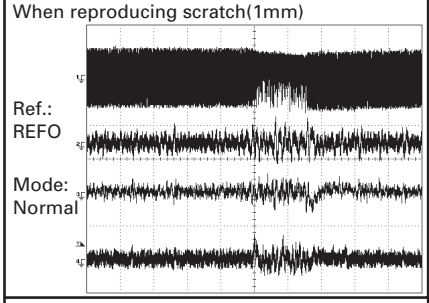
⑬ RFAGC 1V/div 500µs/div
⑦ TIN 1V/div
⑩ TE 1V/div
⑧ FIN 1V/div

When reproducing black dots(1mm)



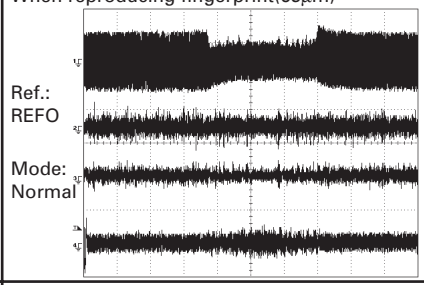
⑬ RFAGC 1V/div 500µs/div
⑩ TE 1V/div
⑥ CIN 500mV/div
⑤ SIN 2V/div

When reproducing scratch(1mm)



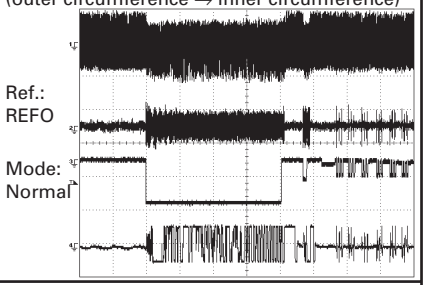
⑬ RFAGC 1V/div 5ms/div
⑩ TE 1V/div
⑥ CIN 500mV/div
⑤ SIN 2V/div

When reproducing fingerprint(65µm)



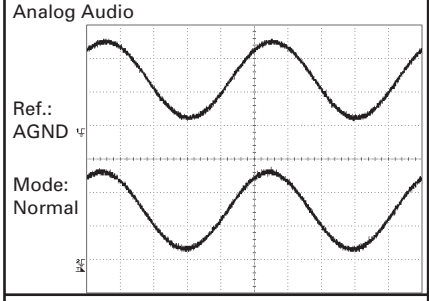
⑬ RFAGC 1V/div 500µs/div
⑩ TE 1V/div
⑥ CIN 500mV/div
⑤ SIN 2V/div

During inside/outside search
(outer circumference → inner circumference)



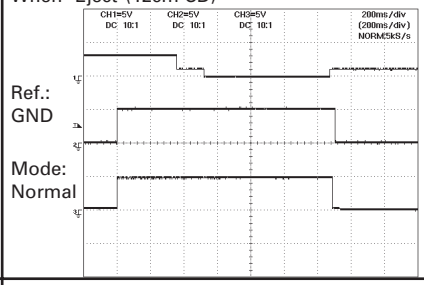
⑭ LOUT 1V/div 200µs/div
⑮ ROUT 1V/div

Analog Audio



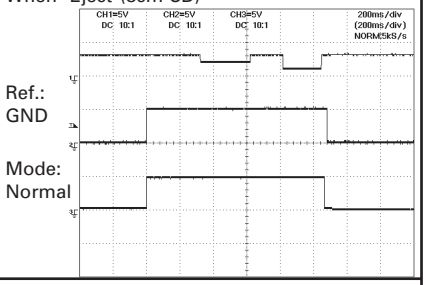
① DSCSNS 5V/div 200ms/div
② CLCONT 5V/div
③ LOEJ 5V/div

When "Eject"(12cm CD)



① DSCSNS 5V/div 200ms/div
② CLCONT 5V/div
③ LOEJ 5V/div

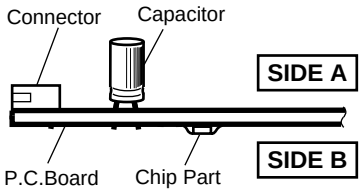
When "Eject"(8cm CD)



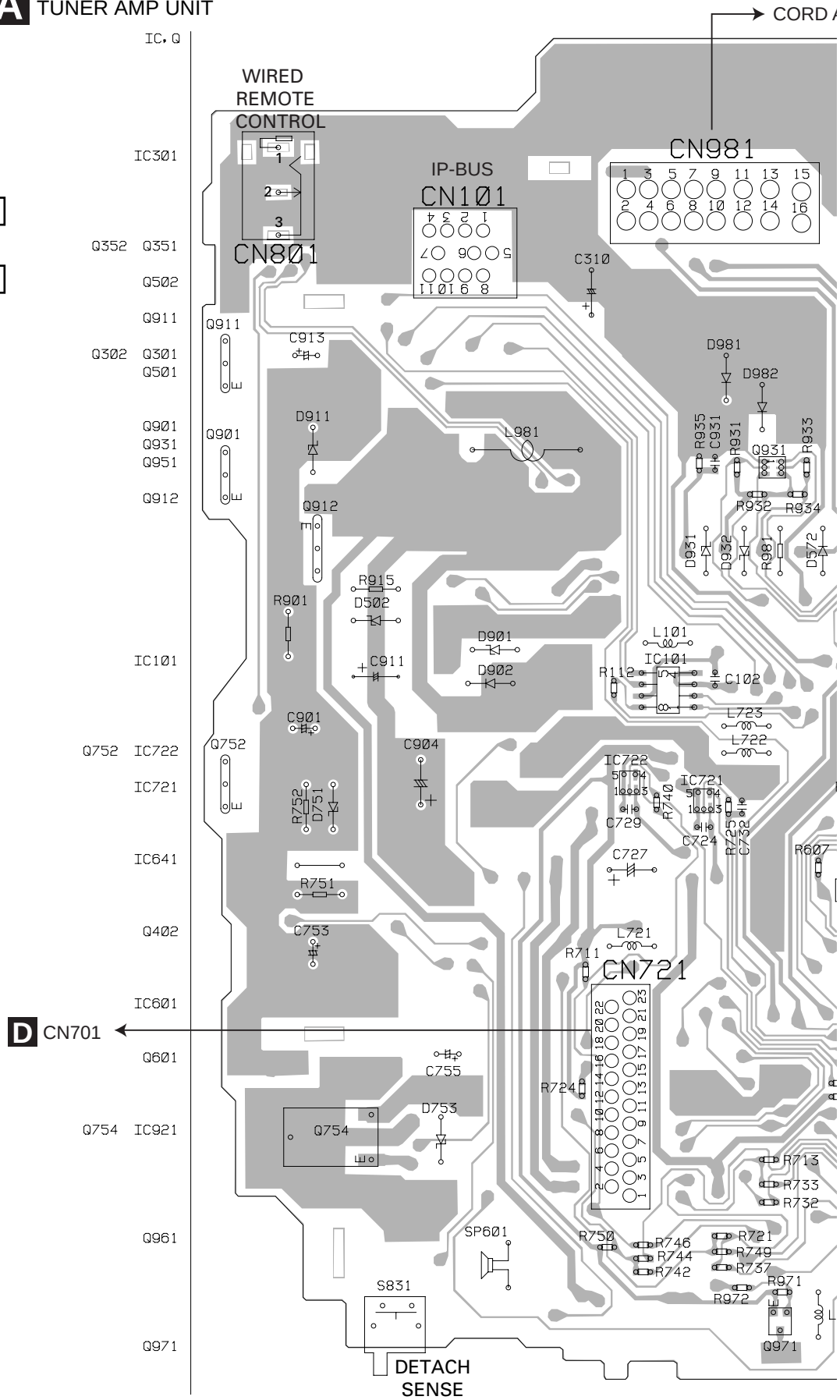
4. PCB CONNECTION DIAGRAM
4.1 TUNER AMP UNIT

NOTE FOR PCB DIAGRAMS

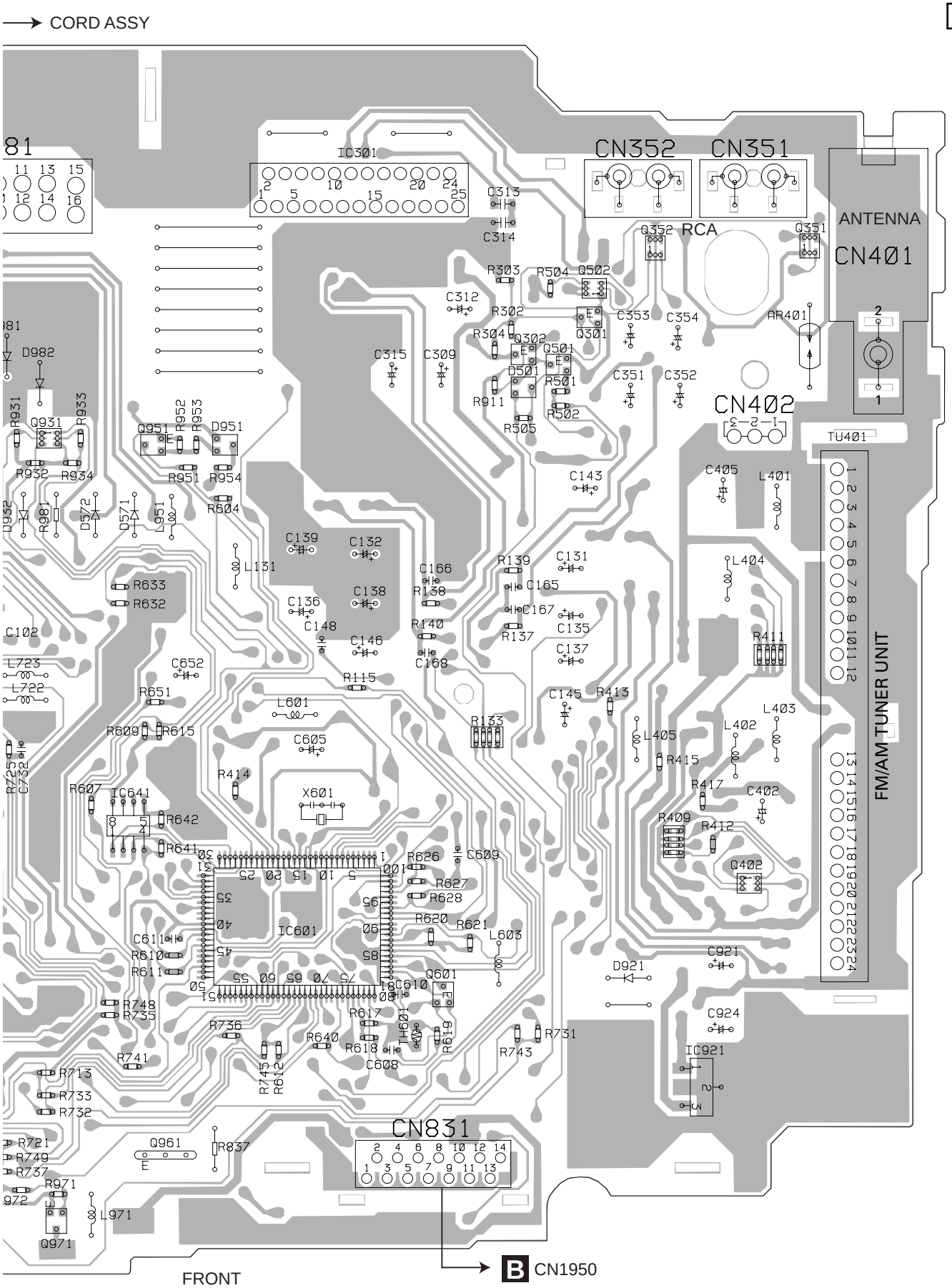
1. The parts mounted on this PCB include all necessary parts for several destination. For further information for respective destinations, be sure to check with the schematic diagram.
2. Viewpoint of PCB diagrams



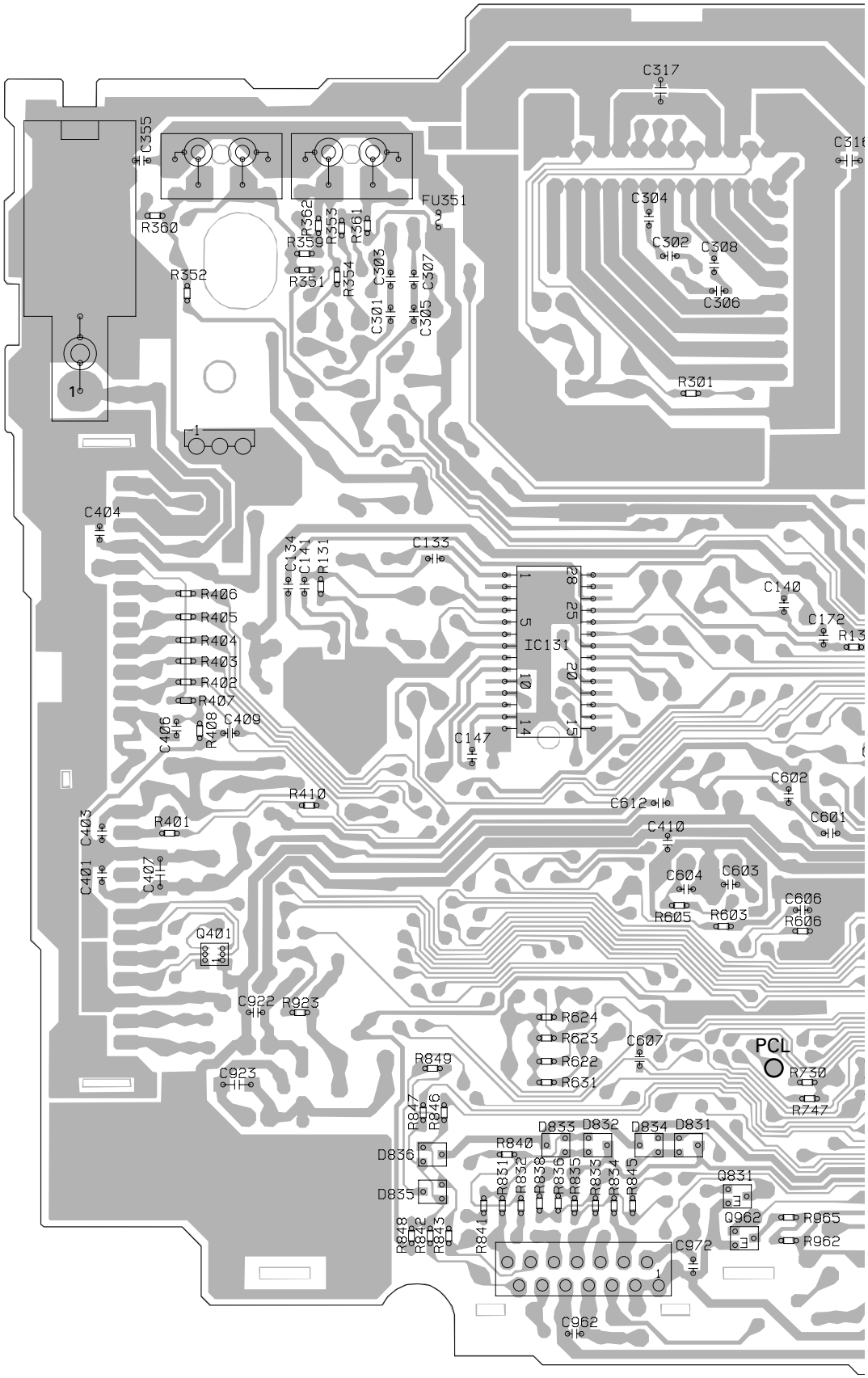
A TUNER AMP UNIT



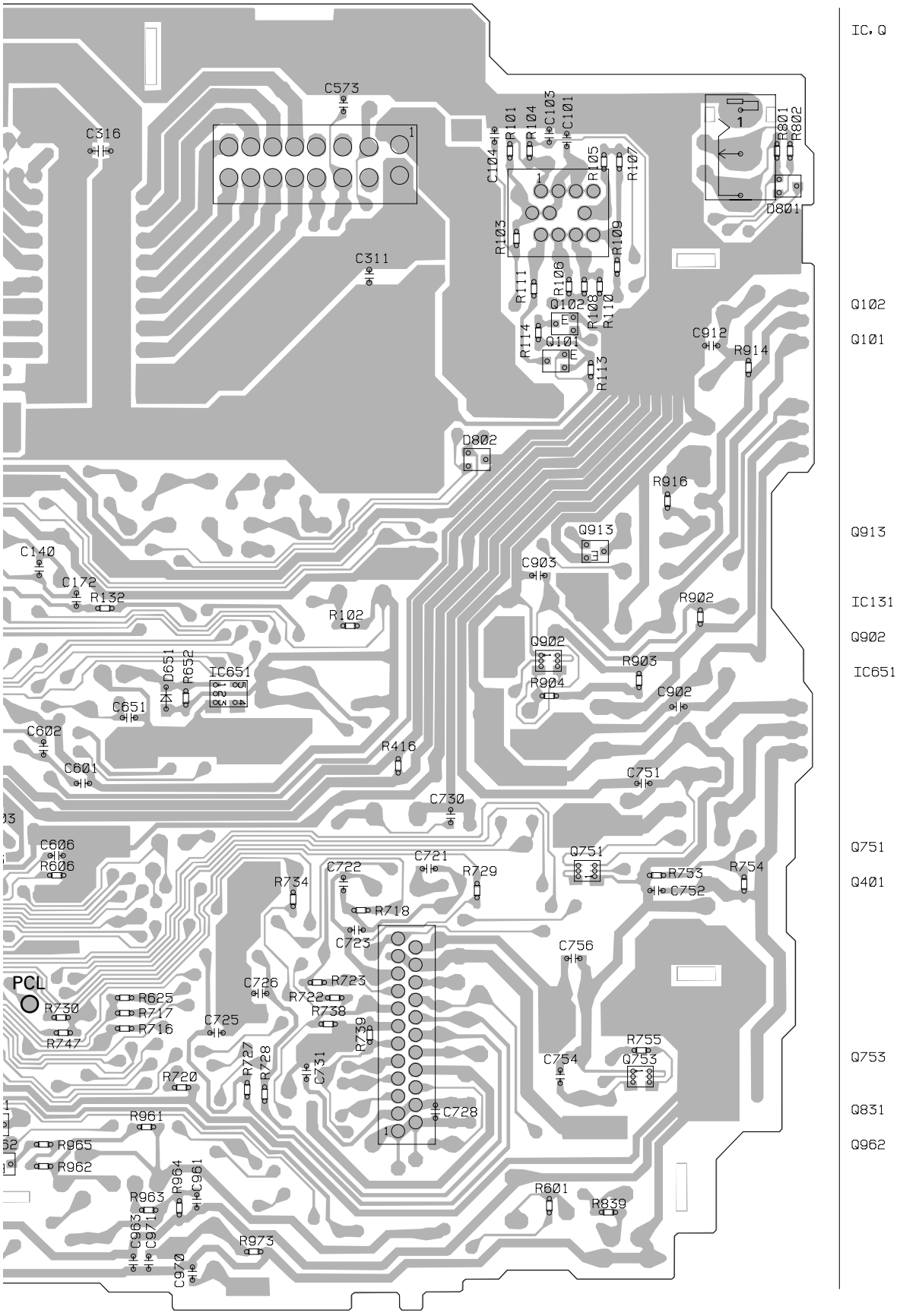
SIDE A


CORD ASSY
CN352
CN351
ANTENNA
CN401
RCA
IC301
CN402
TU401
FM/AM TUNER UNIT
IC601
IC641
IC921
X601
CN831
B CN1950
FRONT

A TUNER AMP UNIT



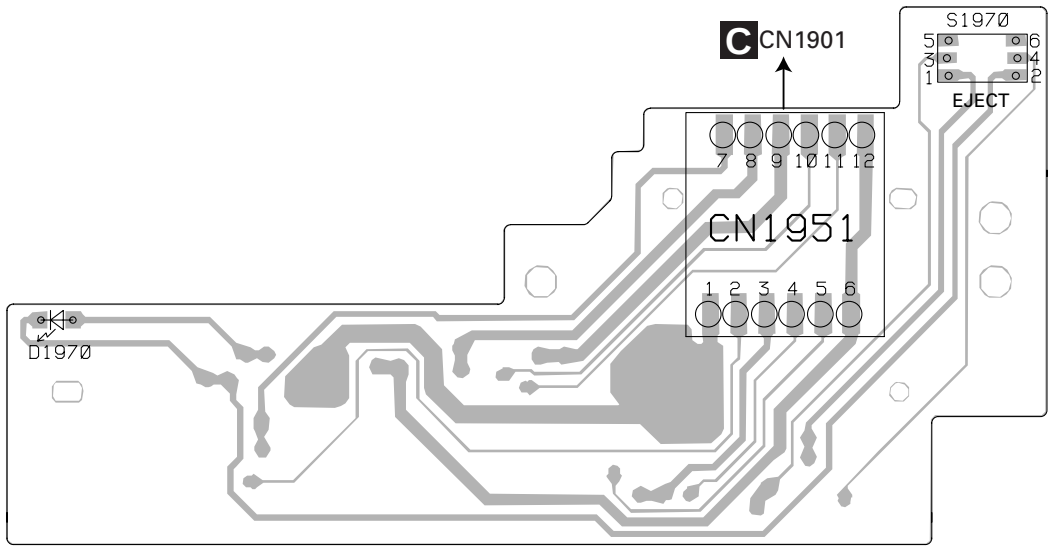
SIDE B


C573
C316
C311
C104
R101
R104
C103
C101
R105
R107
R103
R109
R111
R106
R108
R110
Q102
R114
Q101
R113
D801
R801
R802
C912
R914
D802
R916
Q913
C903
C140
C172
R132
R102
IC131
R902
Q902
R903
R904
C902
D651
R652
IC651
C651
C602
C601
R416
C751
C730
C606
R606
C722
C721
R729
R734
Q751
R753
C752
R754
Q401
R718
C723
C756
PCL
R730
R625
R717
R716
R747
C726
R723
R722
R738
C725
R739
R727
R728
C731
R755
C754
Q753
R720
C728
R961
R965
R962
R964
C961
R963
C963
C971
C970
R973
R601
R839
IC, Q
Q102
Q101
Q913
IC131
Q902
IC651
Q751
Q401
Q753
Q831
Q962

4.2 PANEL UNIT

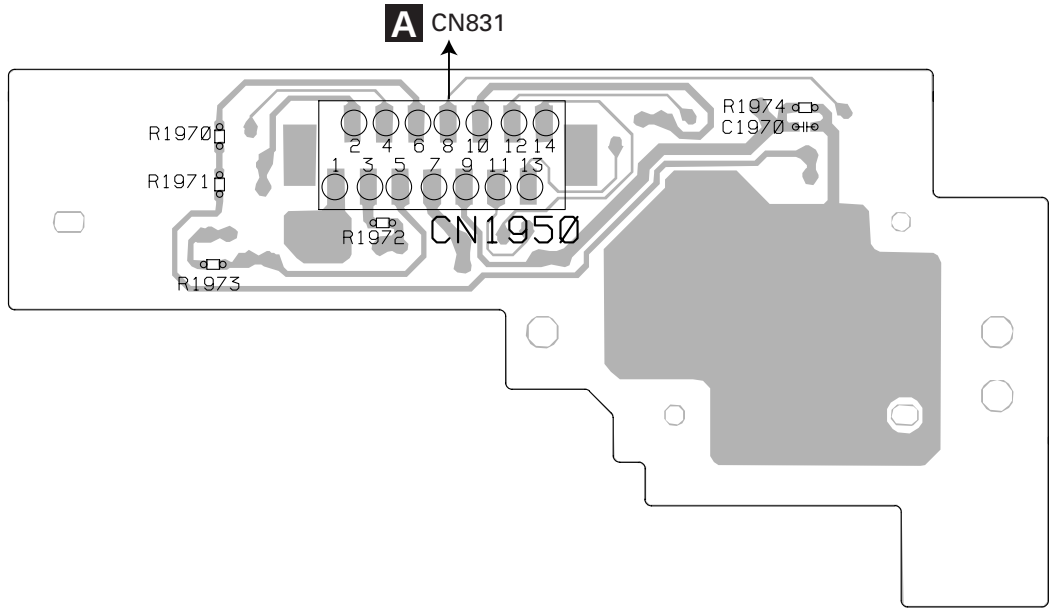
B PANEL UNIT

SIDE A



B PANEL UNIT

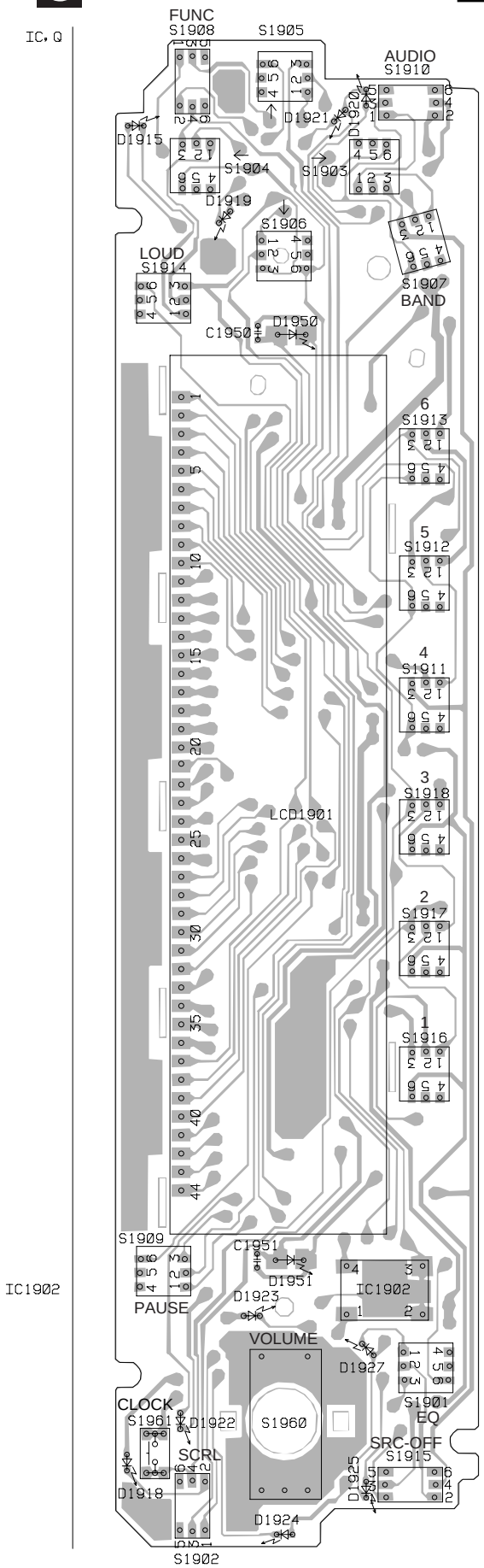
SIDE B



B

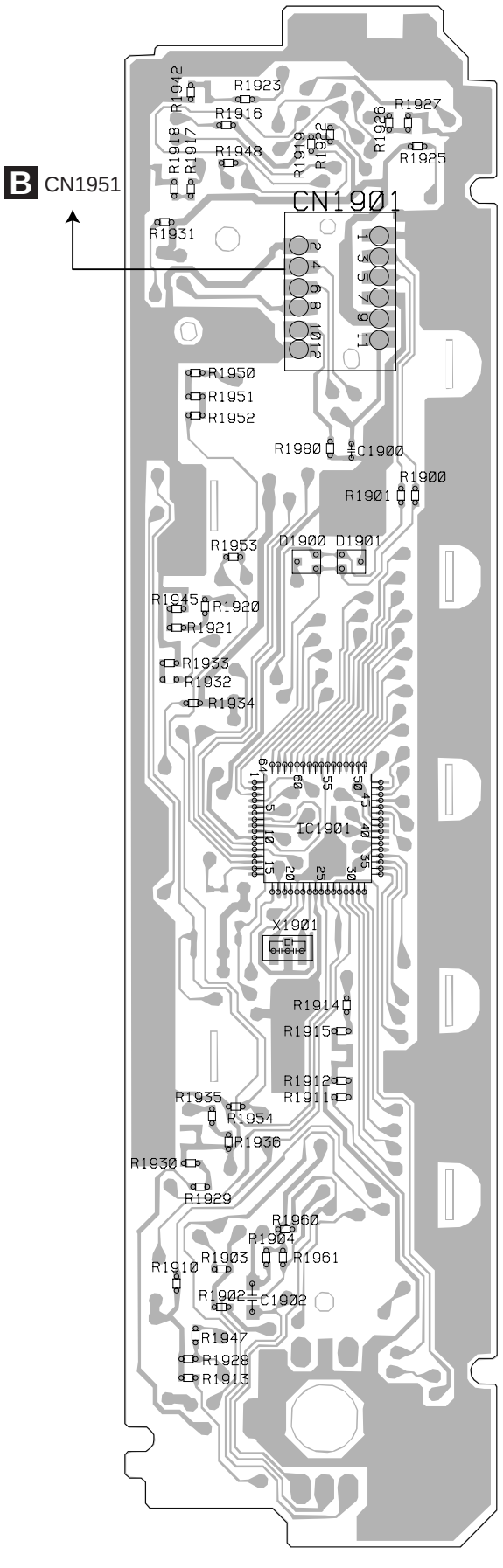
4.3 KEYBOARD UNIT

C KEYBOARD UNIT **SIDE A**



C KEYBOARD UNIT **SIDE B**

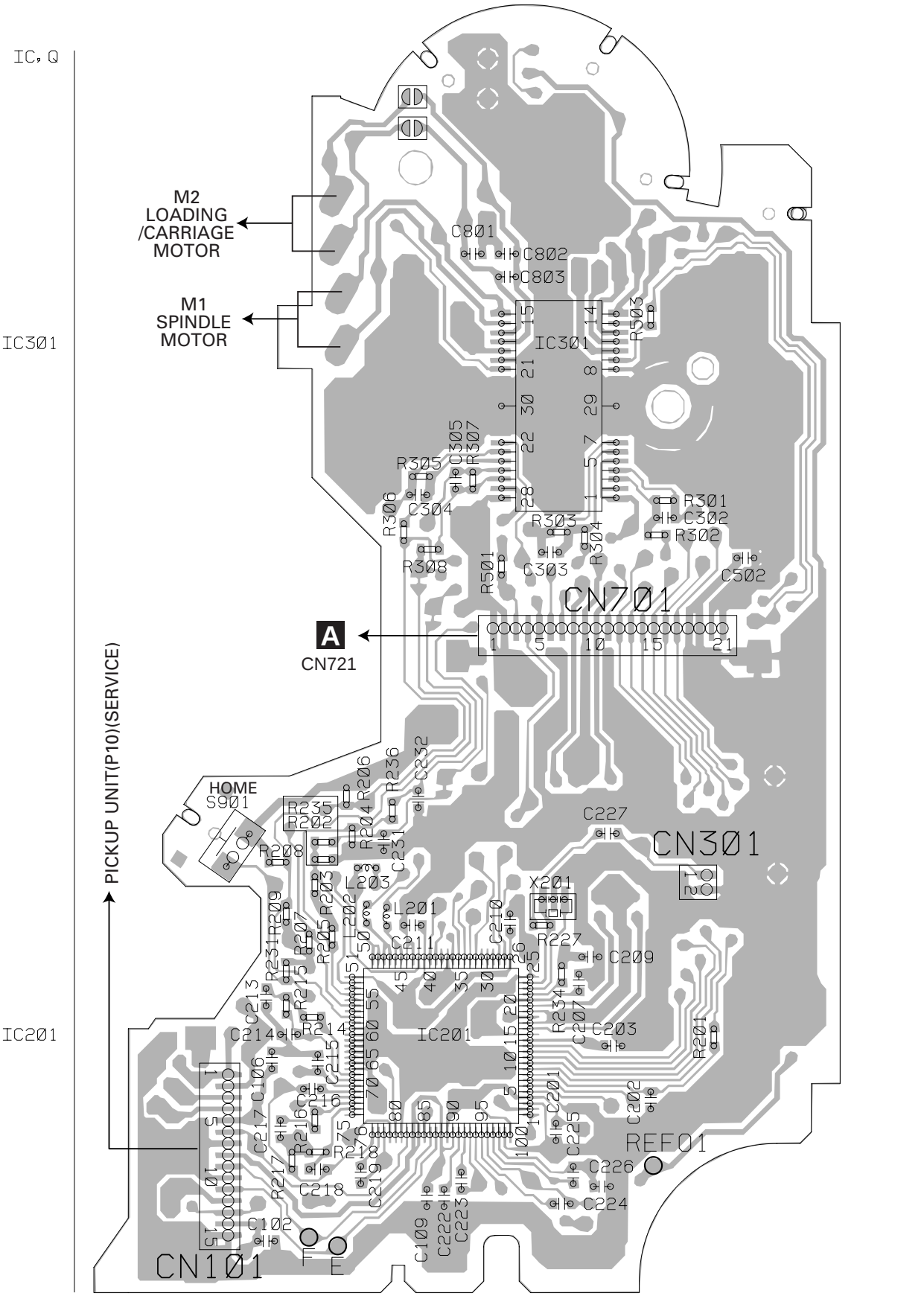
B CN1951



4.4 CD CORE UNIT(S10)

D CD CORE UNIT(S10)

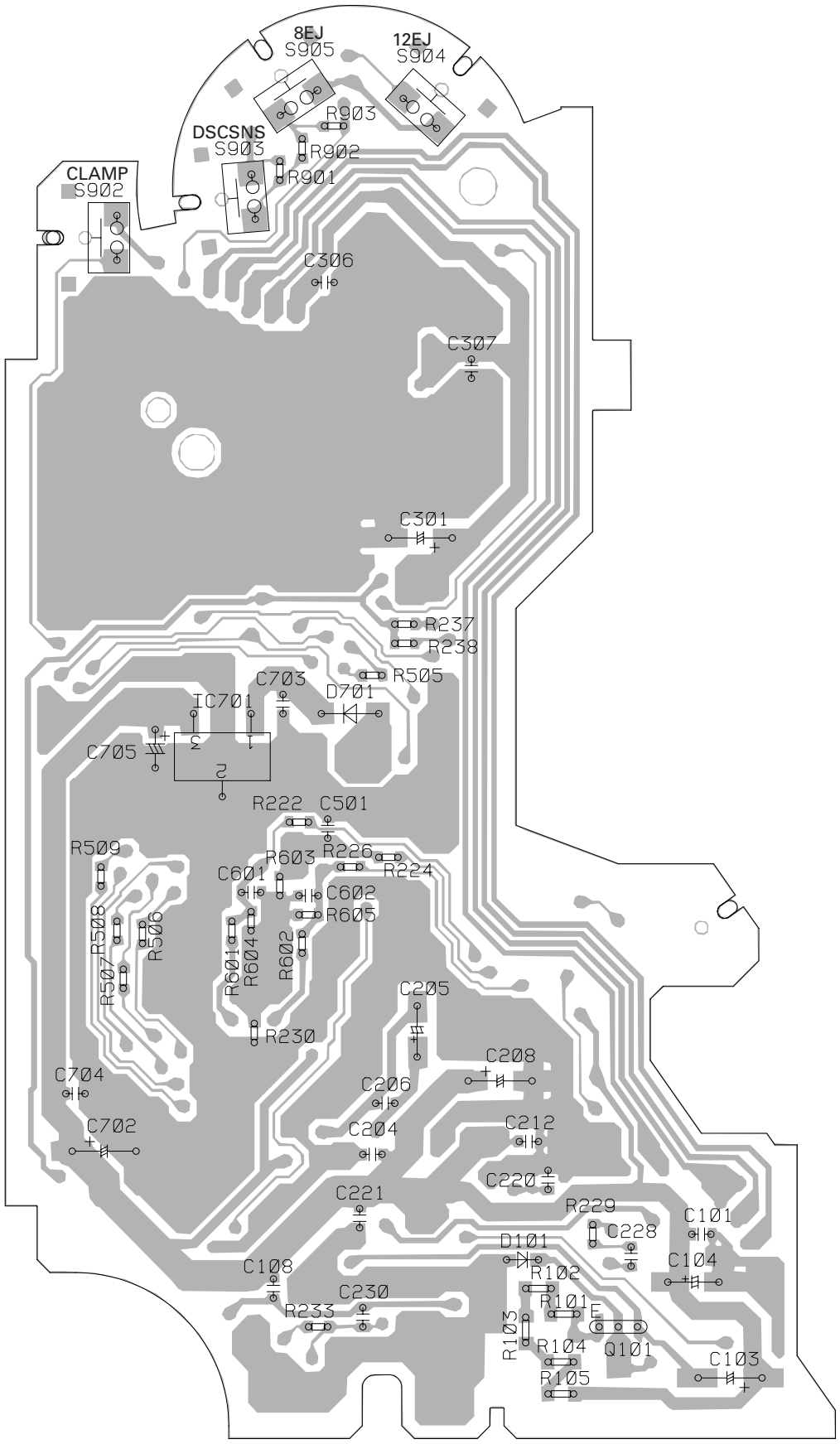
SIDE A



D

D CD CORE UNIT(S10)

SIDE B



5. ELECTRICAL PARTS LIST

NOTE:

- *Parts whose parts numbers are omitted are subject to being not supplied.*
- *The part numbers shown below indicate chip components.*

Chip Resistor

RS1/◯S◯◯◯J,RS1/◯◯S◯◯◯J

Chip Capacitor (except for CQS.....)

CKS....., CCS....., CSZS.....

A

Unit Number:XWM7026(DEH-P26,DEH-P2600)
:XWM7027(DEH-P2650)

Unit Name:Tuner Amp Unit

MISCELLANEOUS

Circuit Symbol and No.		Part No.
IC 101	IC	HA12240FP
IC 131	IC	PML003AM
IC 301	IC	PAL007A
IC 601	IC	PE5405A
IC 651	IC	BD4834G
IC 722	IC	TC7SET08FU
IC 921	IC	NJM2391DL1-33
Q 101	Transistor	2SA1576
Q 102	Transistor	DTC124EU
Q 301	Transistor	DTC124EU
Q 351	Transistor	UMH3N
Q 502	Transistor	UMD2N
Q 601	Transistor	DTA114EU
Q 751	Transistor	UMD2N
Q 752	Transistor	2SD2375
Q 831	Transistor	DTC143EU
Q 901	Transistor	2SD2375
Q 902	Transistor	UMD2N
Q 911	Transistor	2SD2375
Q 912	Transistor	2SB1238
Q 913	Transistor	DTC114EU
Q 931	Transistor	UMX1N
Q 961	Transistor	2SB1238
Q 962	Transistor	DTC114EU
Q 971	Transistor	2SA1577
D 571	Diode	MPG06G-6415G50
D 572	Diode	MPG06G-6415G50
D 751	Diode	HZS9L(B1)
D 831	Diode	DAN202U
D 832	Diode	DAN202U
D 833	Diode	DAP202U
D 834	Diode	DAP202U
D 835	Diode	DAN202U
D 836	Diode	DAP202U
D 901	Diode	HZS6L(B1)
D 902	Diode	MPG06G-6415G50
D 911	Diode	HZS9L(B3)
D 931	Diode	HZS7L(C3)
D 932	Diode	HZS7L(A1)
D 981	Diode	MPG06G-6415G50
D 982	Diode	MPG06G-6415G50
L 131	Inductor	LACU2R2K
L 401	Inductor	LACU4R7K
L 404	Inductor	LACU1R0K
L 601	Inductor	LACU2R2K
L 971	Inductor	LACU2R2K
L 981	Choke Coil 600µH	CTH1291
X 601	Radiator 12.58291MHz	CSS1402
S 831	Switch(DETACH SENSE)	CSN1039
FU351	Fuse 3A	CEK1286
	Fuse 10A	CEK1208
	FM/AM Tuner Unit	CWE1646
SP601	Buzzer	CPV1062
AR401	Surge Protector	DSP-201M-S00B

RESISTORS

R 101	RS1/16S620J
R 102	RS1/16S0R0J
R 103	RS1/16S101J
R 104	RS1/16S101J
R 105	RS1/16S181J
R 106	RS1/16S181J
R 107	RS1/16S223J
R 108	RS1/16S223J
R 109	RS1/16S102J
R 110	RS1/16S102J
R 111	RS1/16S222J
R 112	RS1/16S102J
R 113	RS1/16S332J
R 114	RS1/16S562J
R 115	RS1/16S473J
R 131	RS1/16S0R0J
R 132	RS1/16S0R0J
R 133	RAB4C102J
R 137	RS1/16S101J
R 138	RS1/16S101J
R 139	RS1/16S101J
R 140	RS1/16S101J
R 301	RS1/16S153J
R 302	RS1/16S103J
R 303	RS1/16S103J
R 304	RS1/16S331J
R 351	RS1/16S821J
R 352	RS1/16S821J
R 359	RS1/16S223J
R 360	RS1/16S223J
R 401	RS1/16S681J
R 403	RS1/16S122J

Circuit Symbol and No.		Part No.
R 404		RS1/16S681J
R 405		RS1/16S681J
R 406		RS1/16S681J
R 413		RS1/16S0R0J
R 414		RS1/16S0R0J
R 415		RS1/16S0R0J
R 416		RS1/16S0R0J
R 417		RS1/16S0R0J
R 504		RS1/16S102J
R 505		RS1/16S0R0J
R 601		RS1/16S102J
R 603		RS1/16S473J
R 605		RS1/16S102J
R 606		RS1/16S473J
R 607		RS1/16S104J
R 609	(DEH-P26,DEH-P2600)	RS1/16S103J
R 615	(DEH-P26,DEH-P2600)	RS1/16S103J
R 617	(DEH-P2650)	RS1/16S104J
R 618	(DEH-P26,DEH-P2600)	RS1/16S104J
R 619		RS1/16S104J
R 620		RS1/16S473J
R 621		RS1/16S473J
R 622		RS1/16S473J
R 623		RS1/16S473J
R 624		RS1/16S473J
R 625		RS1/16S473J
R 626		RS1/16S681J
R 627		RS1/16S681J
R 628		RS1/16S681J
R 632	(DEH-P2650)	RS1/16S104J
R 633	(DEH-P2650)	RS1/16S104J
R 640		RS1/16S0R0J
R 651		RS1/16S102J
R 652		RS1/16S183J
R 713		RS1/16S104J
R 716		RS1/16S221J
R 724		RS1/16S104J
R 727		RS1/16S0R0J
R 728		RS1/16S0R0J
R 729		RS1/16S221J
R 730		RS1/16S221J
R 731		RS1/16S221J
R 732		RS1/16S221J
R 733		RS1/16S102J
R 735		RS1/16S221J
R 736		RS1/16S221J
R 737		RS1/16S221J
R 740		RS1/16S102J
R 741		RS1/16S221J
R 742		RS1/16S221J
R 749		RS1/16S0R0J
R 751		RD1/4PU221J
R 752		RD1/4PU221J
R 753		RS1/16S222J
R 754		RS1/16S472J
R 801	(DEH-P26,DEH-P2600)	RS1/16S102J
R 802	(DEH-P26,DEH-P2600)	RS1/16S102J
R 831		RS1/16S222J
R 832		RS1/16S222J
R 833		RS1/16S222J

Circuit Symbol and No.	Part No.
R 834	RS1/16S222J
R 835	RS1/16S473J
R 836	RS1/16S473J
R 837	RD1/4PU391J
R 838	RS1/16S102J
R 839	RS1/16S102J
R 840	RS1/16S102J
R 841	RS1/16S102J
R 842	RS1/16S222J
R 843	RS1/16S222J
R 845	RS1/16S102J
R 846	RS1/16S102J
R 847	RS1/16S102J
R 848	RS1/16S104J
R 849	RS1/16S473J
R 901	RD1/4PU221J
R 902	RS1/16S223J
R 903	RS1/16S821J
R 904	RS1/16S821J
R 914	RS1/16S152J
R 915	RD1/4PU152J
R 916	RS1/16S223J
R 931	RS1/16S104J
R 932	RS1/16S473J
R 933	RS1/16S103J
R 934	RS1/16S473J
R 935	RS1/16S472J
R 961	RS1/16S223J
R 962	RS1/16S182J
R 963	RS1/16S1R0J
R 965	RS1/16S182J
R 971	RS1/16S153J
R 972	RS1/16S153J
R 973	RS1/16S222J
R 981	RD1/4PU102J

CAPACITORS

C 101	CKSRYB104K16
C 102	CKSRYB473K25
C 103	CKSRYB102K50
C 104	CKSRYB102K50
C 131	CEJQ1R0M50
C 132	CEJQ1R0M50
C 133	CKSRYB104K16
C 134	CKSRYB104K16
C 135	CEJQ1R0M50
C 136	CEJQ1R0M50
C 137	CEJQ1R0M50
C 138	CEJQ1R0M50
C 139	CEJQ470M16
C 140	CKSRYB104K16
C 143	CEJQ100M16
C 145	CEJQ4R7M35
C 146	CEJQ4R7M35
C 147	CKSRYB153K50
C 148	CKSRYB153K50
C 301	CKSRYB474K10
C 302	CKSRYB474K10
C 303	CKSRYB474K10

Circuit Symbol and No.		Part No.
C 304		CKSRYB474K10
C 305		CKSRYB474K10
C 306		CKSRYB474K10
C 307		CKSRYB474K10
C 308		CKSRYB474K10
C 309		CEJQ330M10
C 310	3300µF/16V	CCH1486
C 311		CKSRYB104K25
C 312		CEHAR100M16
C 313		CKSQYB225K10
C 314		CKSQYB225K10
C 317		CKSQYB105K16
C 351		CEJQ2R2M50
C 352		CEJQ2R2M50
C 401		CKSRYB103K50
C 402		CEJQ470M6R3
C 403		CKSRYB103K50
C 404		CKSRYB103K50
C 405		CEJQ101M16
C 407		CKSYB475K10
C 602		CKSRYB105K10
C 603		CCSRCH200J50
C 604		CCSRCH200J50
C 605		CEJQ4R7M35
C 606		CKSRYB104K16
C 608		CCSRCH101J50
C 609		CCSRCH470J50
C 611		CKSRYB104K16
C 652		CEJQ1R0M50
C 729		CKSRYB473K25
C 751		CKSRYB224K10
C 752		CKSRYB102K50
C 753		CEJQ101M16
C 901		CEJQ470M10
C 902		CKSRYB103K50
C 903		CKSRYB472K50
C 904	470µF/16V	CCH1331
C 911		CEJQ221M10
C 912		CKSRYB103K50
C 913		CEJQ101M16
C 921		CEJQ220M10
C 922		CKSRYB103K50
C 924		CEJQ4R7M35
C 931		CKSRYB104K25
C 962		CKSRYB103K50
C 972		CKSRYB104K25

C

Unit Number:XWM7035(DEH-P26)
Unit Name:Keyboard Unit

MISCELLANEOUS

IC 1901	IC	PD6340A
IC 1902	IC	RS-140
D 1900	Diode	DAN202U
D 1901	Diode	DAP202U
D 1915	LED	CL-195SR-CD
D 1918	LED	CL-195SR-CD
D 1919	LED	CL-195SR-CD
D 1921	LED	CL-195SR-CD
D 1922	LED	CL-195SR-CD
D 1923	LED	CL-195SR-CD
D 1924	LED	CL-195SR-CD
D 1927	LED	CL-195SR-CD
D 1950	LED	NSCW505C-3388
D 1951	LED	NSCW505C-3388
X 1901	Ceramic Resonator 4.97MHz	CSS1573
S 1901	Push Switch	CSG1133
S 1902	Push Switch	CSG1135
S 1903	Push Switch	CSG1133
S 1904	Push Switch	CSG1133
S 1905	Push Switch	CSG1133
S 1906	Push Switch	CSG1133
S 1907	Push Switch	CSG1133
S 1908	Push Switch	CSG1135
S 1909	Push Switch	CSG1133
S 1910	Push Switch	CSG1135
S 1911	Push Switch	CSG1133
S 1912	Push Switch	CSG1133
S 1913	Push Switch	CSG1133
S 1914	Push Switch	CSG1133
S 1915	Push Switch	CSG1135
S 1916	Push Switch	CSG1133
S 1917	Push Switch	CSG1133
S 1918	Push Switch	CSG1133
S 1960	Encoder(VOLUME)	XSD7001
S 1961	Push Switch	CSG1111
	LCD	CAW1760

RESISTORS

R 1900	RS1/16S222J
R 1901	RS1/16S222J
R 1902	RS1/16S2R2J
R 1904	RS1/16S121J
R 1910	RS1/16S181J
R 1911	RS1/16S181J
R 1912	RS1/16S181J
R 1913	RS1/16S181J
R 1914	RS1/16S181J
R 1915	RS1/16S181J
R 1916	RS1/16S181J
R 1917	RS1/16S181J
R 1918	RS1/16S181J
R 1919	RS1/16S181J
R 1920	RS1/16S181J
R 1921	RS1/16S181J
R 1922	RS1/16S181J
R 1923	RS1/16S181J
R 1925	RS1/16S181J
R 1926	RS1/16S181J
R 1927	RS1/16S181J
R 1928	RS1/16S181J
R 1929	RS1/16S181J
R 1930	RS1/16S181J
R 1931	RS1/16S181J
R 1932	RS1/16S181J
R 1933	RS1/16S181J
R 1934	RS1/16S181J

Circuit Symbol and No.		Part No.
R 1935		RS1/16S181J
R 1936		RS1/16S181J
R 1942		RS1/16S181J
R 1945		RS1/16S181J
R 1947		RS1/16S0R0J
R 1948		RS1/16S0R0J
R 1950		RS1/16S181J
R 1951		RS1/16S181J
R 1952		RS1/16S151J
R 1960		RS1/16S472J
R 1980		RS1/16S473J

CAPACITORS

C 1900		CKSRYB224K10
C 1902		CKSYF106Z10

C

Unit Number:XWM7034(DEH-P2600)
Unit Name:Keyboard Unit

MISCELLANEOUS

IC 1901	IC	PD6340A
IC 1902	IC	RS-140
D 1900	Diode	DAN202U
D 1901	Diode	DAP202U
D 1915	LED	CL-195PG-CD
D 1918	LED	CL-195PG-CD
D 1919	LED	CL-195PG-CD
D 1921	LED	CL-195PG-CD
D 1922	LED	CL-195PG-CD
D 1923	LED	CL-195PG-CD
D 1924	LED	CL-195PG-CD
D 1927	LED	CL-195PG-CD
D 1950	LED	NSCW505C-3388
D 1951	LED	NSCW505C-3388
X 1901	Ceramic Resonator 4.97MHz	CSS1573
S 1901	Switch	CSG1107
S 1902	Push Switch	CSG1112
S 1903	Switch	CSG1107
S 1904	Switch	CSG1107
S 1905	Switch	CSG1107
S 1906	Switch	CSG1107
S 1907	Switch	CSG1107
S 1908	Push Switch	CSG1112
S 1909	Switch	CSG1107
S 1910	Push Switch	CSG1112
S 1911	Switch	CSG1107
S 1912	Switch	CSG1107
S 1913	Switch	CSG1107
S 1914	Switch	CSG1107
S 1915	Push Switch	CSG1112
S 1916	Switch	CSG1107
S 1917	Switch	CSG1107
S 1918	Switch	CSG1107
S 1960	Encoder(VOLUME)	XSD7001
S 1961	Push Switch	CSG1111
	LCD	CAW1759

Circuit Symbol and No.	Part No.

RESISTORS

R 1900	RS1/16S222J
R 1901	RS1/16S222J
R 1902	RS1/16S2R2J
R 1904	RS1/16S121J
R 1910	RS1/16S181J
R 1911	RS1/16S181J
R 1912	RS1/16S181J
R 1913	RS1/16S181J
R 1914	RS1/16S181J
R 1915	RS1/16S181J
R 1916	RS1/16S181J
R 1917	RS1/16S181J
R 1918	RS1/16S181J
R 1919	RS1/16S181J
R 1920	RS1/16S181J
R 1921	RS1/16S181J
R 1922	RS1/16S181J
R 1923	RS1/16S181J
R 1925	RS1/16S181J
R 1926	RS1/16S181J
R 1927	RS1/16S181J
R 1928	RS1/16S181J
R 1929	RS1/16S181J
R 1930	RS1/16S181J
R 1931	RS1/16S181J
R 1932	RS1/16S181J
R 1933	RS1/16S181J
R 1934	RS1/16S181J
R 1935	RS1/16S181J
R 1936	RS1/16S181J
R 1942	RS1/16S181J
R 1945	RS1/16S181J
R 1947	RS1/16S0R0J
R 1948	RS1/16S0R0J
R 1950	RS1/16S181J
R 1951	RS1/16S181J
R 1952	RS1/16S151J
R 1960	RS1/16S472J
R 1980	RS1/16S473J

CAPACITORS

C 1900	CKSRYB224K10
C 1902	CKSYF106Z10

C

Unit Number:XWM7068(DEH-P2650)
Unit Name:Keyboard Unit

MISCELLANEOUS

IC 1901	IC	PD6340A
IC 1902	IC	RS-140
D 1900	Diode	DAN202U
D 1901	Diode	DAP202U
D 1915	LED	CL-195PG-CD
D 1918	LED	CL-195PG-CD
D 1919	LED	CL-195PG-CD
D 1921	LED	CL-195PG-CD

Circuit Symbol and No.		Part No.
D 1922	LED	CL-195PG-CD
D 1923	LED	CL-195PG-CD
D 1924	LED	CL-195PG-CD
D 1927	LED	CL-195PG-CD
D 1950	LED	NSCW505C-3388
D 1951	LED	NSCW505C-3388
X 1901	Ceramic Resonator 4.97MHz	CSS1573
S 1901	Switch	CSG1107
S 1902	Push Switch	CSG1112
S 1903	Switch	CSG1107
S 1904	Switch	CSG1107
S 1905	Switch	CSG1107
S 1906	Switch	CSG1107
S 1907	Switch	CSG1107
S 1908	Push Switch	CSG1112
S 1909	Switch	CSG1107
S 1910	Push Switch	CSG1112
S 1911	Switch	CSG1107
S 1912	Switch	CSG1107
S 1913	Switch	CSG1107
S 1914	Switch	CSG1107
S 1915	Push Switch	CSG1112
S 1916	Switch	CSG1107
S 1917	Switch	CSG1107
S 1918	Switch	CSG1107
S 1960	Encoder(VOLUME)	XSD7001
S 1961	Push Switch	CSG1111
	LCD	CAW1764

RESISTORS

R 1900		RS1/16S222J
R 1901		RS1/16S222J
R 1902		RS1/16S2R2J
R 1904		RS1/16S121J
R 1910		RS1/16S181J
R 1911		RS1/16S181J
R 1912		RS1/16S181J
R 1913		RS1/16S181J
R 1914		RS1/16S181J
R 1915		RS1/16S181J
R 1916		RS1/16S181J
R 1917		RS1/16S181J
R 1918		RS1/16S181J
R 1919		RS1/16S181J
R 1920		RS1/16S181J
R 1921		RS1/16S181J
R 1922		RS1/16S181J
R 1923		RS1/16S181J
R 1925		RS1/16S181J
R 1926		RS1/16S181J
R 1927		RS1/16S181J
R 1928		RS1/16S181J
R 1929		RS1/16S181J
R 1930		RS1/16S181J
R 1931		RS1/16S181J
R 1932		RS1/16S181J
R 1933		RS1/16S181J
R 1934		RS1/16S181J
R 1935		RS1/16S181J
R 1936		RS1/16S181J
R 1942		RS1/16S181J
R 1945		RS1/16S181J
R 1947		RS1/16S0R0J
R 1948		RS1/16S0R0J
R 1950		RS1/16S181J
R 1951		RS1/16S181J
R 1952		RS1/16S151J
R 1960		RS1/16S472J
R 1980		RS1/16S473J

CAPACITORS

C 1900	CKSRYB224K10
C 1902	CKSYF106Z10

B

Unit Number:CWM8758
Unit Name:Panel Unit

MISCELLANEOUS

D 1970	LED	CL220PGC
S 1970	Push Switch(EJECT)	CSG1112

RESISTORS

R 1970	RS1/16S101J
R 1971	RS1/16S101J
R 1972	RS1/16S0R0J

CAPACITORS

C 1970	CKSRYB104K16

D

Unit Number:CWX2947
Unit Name:CD CORE UNIT(S10)

MISCELLANEOUS

IC 201	IC	UPD63712AGC
IC 301	IC	BA5835FP
IC 701	IC	NJM2391DL1-33
Q 101	Transistor	2SB1132
D 101	Diode	1SS355
D 701	Diode	1SR154-400
X 201	Ceramic Resonator 16.934MHz	CSS1603
S 901	Switch(HOME)	CSN1051
S 902	Switch(CLAMP)	CSN1051
S 903	Spring Switch(DSCSNS)	CSN1052
S 904	Switch(12EJ)	CSN1051
S 905	Switch(8EJ)	CSN1051

RESISTORS

R 101	RS1/10S1R5J
R 102	RS1/10S1R5J
R 103	RS1/10S1R5J
R 104	RS1/10S1R5J
R 105	RS1/10S1R5J
R 201	RS1/16S102J

Circuit Symbol and No.		Part No.
R 202		RS1/16S1002D
R 203		RS1/16S1002D
R 204		RS1/16S1002D
R 205		RS1/16S1002D
R 206		RS1/16S1002D
R 207		RS1/16S1002D
R 208		RS1/16S1002D
R 209		RS1/16S1002D
R 214		RS1/16S103J
R 215		RS1/16S393J
R 216		RS1/16S122J
R 217		RS1/16S562J
R 218		RS1/16S472J
R 234		RS1/16S0R0J
R 235		RS1/16S103J
R 236		RS1/16S103J
R 301		RS1/16S183J
R 302		RS1/16S822J
R 303		RS1/16S183J
R 304		RS1/16S822J
R 305		RS1/16S183J
R 306		RS1/16S183J
R 307		RS1/16S183J
R 308		RS1/16S183J
R 501		RS1/16S102J
R 503		RS1/16S102J
R 505		RS1/16S102J
R 506		RS1/16S221J
R 507		RS1/16S221J
R 508		RS1/16S221J
R 509		RS1/16S221J
R 601		RS1/16S101J
R 602		RS1/16S101J
R 603		RS1/16S0R0J
R 901		RS1/16S104J
R 902		RS1/16S473J
R 903		RS1/16S273J

CAPACITORS

C 101		CKSRYB104K16
C 102		CKSRYB104K16
C 103	100µF/16V	CCH1504
C 104	47µF/6.3V	CCH1506
C 108		CKSRYB104K16
C 109		CKSRYB104K16
C 201		CKSRYB104K16
C 202		CKSRYB471K50
C 205	22µF/6.3V	CCH1507
C 206		CKSRYB103K25
C 207		CKSRYB104K16
C 209		CKSRYB104K16
C 210		CKSRYB104K16
C 211		CKSRYB104K16
C 212		CKSRYB104K16
C 213		CKSRYB332K50
C 214		CKSRYB473K25
C 215		CKSRYB104K16
C 216		CKSRYB103K25
C 217		CCSRCH560J50
C 218		CCSRCH5R0C50
C 219		CKSRYB104K16
C 220		CKSRYB104K16
C 221		CKSRYB104K16
C 222		CKSRYB103K25
C 223		CCSRCH680J50
C 224		CCSRCH470J50
C 225		CKSRYB682K50
C 231		CKSRYB102K50
C 232		CKSRYB102K50
C 301	100µF/16V	CCH1504
C 302		CCSRCH221J50
C 303		CCSRCH221J50
C 304		CKSRYB472K50
C 305		CKSRYB103K25
C 306		CKSRYB104K16
C 501		CKSRYB103K25
C 502		CKSRYB103K25
C 702	100µF/16V	CCH1504
C 703		CKSRYB104K16
C 705	10µF/6.3V	CCH1470

Miscellaneous Parts List

	Pickup Unit(P10)(Service)	CXX1641
M 1	Motor Unit(SPINDLE)	CXB6007
M 2	Motor Unit(LOADING/CARRIAGE)	CXB8933

6. ADJUSTMENT
6.1 CD ADJUSTMENT

1) Cautions on adjustments
• In this product the single voltage (3.3V) is used for the regulator. The reference voltage is the REFO1 (1.65V) instead of the GND.
If you should mistakenly short the REFO1 with the GND during adjustment, accurate voltage will not be obtained, and the servo's misoperation will apply excessive shock to the pickup. To avoid such problems:
a. Do not mix up the REFO1 with the GND when connecting the (-) probe of measuring instruments. Especially on an oscilloscope, avoid connecting the (-) probe for CH1 to the GND.
b. In many cases, measuring instruments have the same potential as that for the (-) probe. Be sure to set the measuring instruments to the floating state.
c. If you have mistakenly connected the REFO1 to the GND, turn off the regulator or the power immediately.

• Before mounting and removing filters or leads for adjustment, be sure to turn off the regulator.

• For stable circuit operation, keep the mechanism operating for about one minute or more after the regulator is turned on.

• In the test mode, any software protections will not work. Avoid applying any mechanical or electrical shock to the mechanism during adjustment.

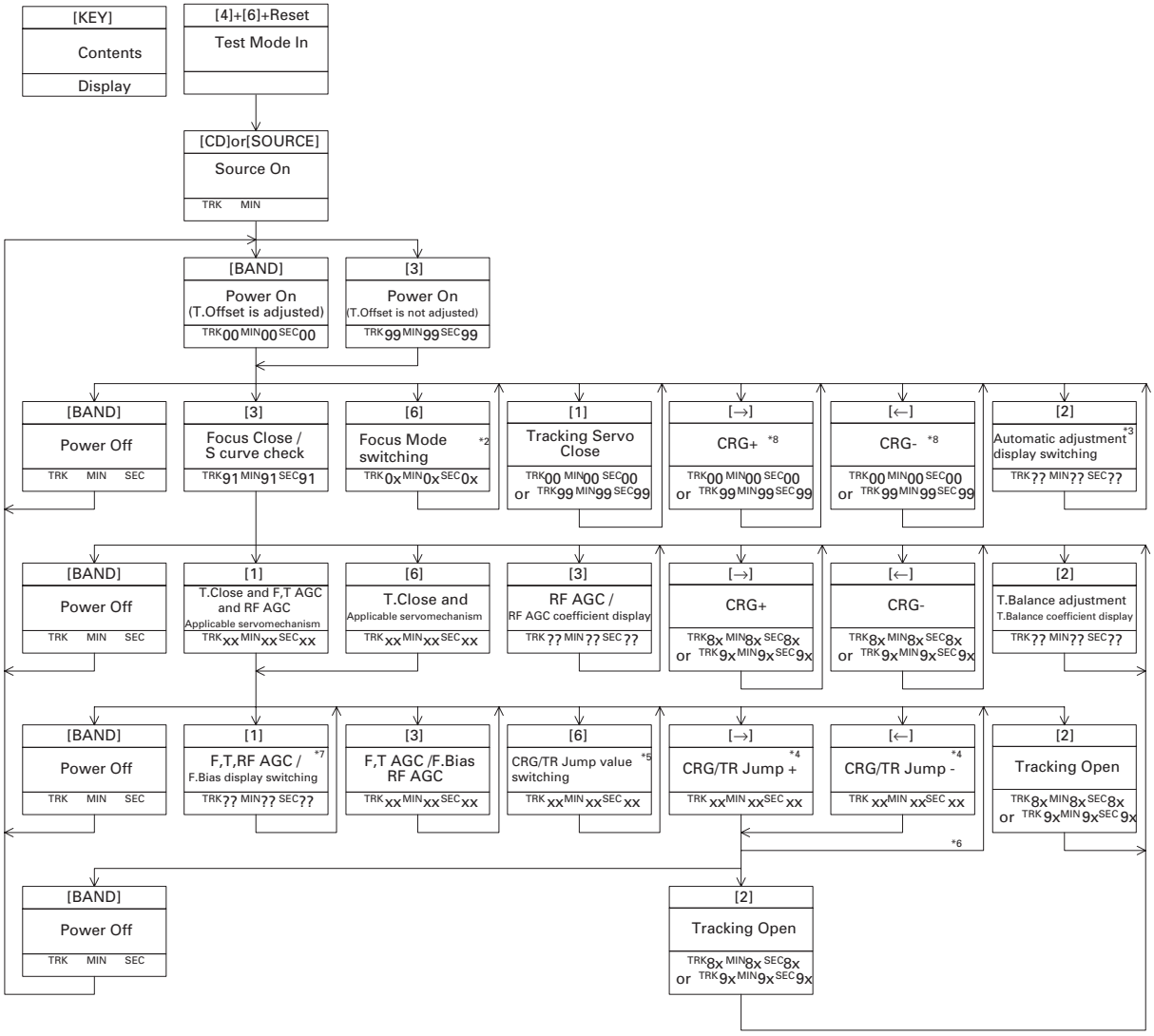
• The RFI and RFO signals with a wide frequency range are easy to oscillate. When observing the signals, insert a resistor of 1k ohms in series.

• The load and eject operation is not guarantied with the mechanism upside down. If the mechanism is blocked due to mistaken eject operation, reset the product or turn off and on the ACC to restore it.

2) Test mode
This mode is used to adjust the CD mechanism module.
• To enter the test mode.
While pressing the 4 and 6 keys at the same time, reset.
• To exit from the test mode.
Turn off the ACC and back up.

Notes:
a. During ejection, do not press any other keys than the EJECT key until the loaded disc is ejected.
b. If you have pressed the (→) key or (←) key during focus search, turn off the power immediately to protect the actuator from damage caused by the lens stuck.
c. For the TR jump modes except 100TR, the track jump operation will continue even if the key is released.
d. For the CRG move and 100TR jump modes, the tracking loop will be closed at the same time when the key is released.
e. When the power is turned off and on, the jump mode is reset to the single TR (91), the RF amp gain is set to 0dB, and the auto-adjustment values are reset to the default settings.

● Flow Chart



*1) TYP (TRK MIN SEC) → -12dB (TRK 12 MIN 12 SEC 12)

*2) Focus Close (TRK 00 MIN 00 SEC 00 / TRK 99 MIN 99 SEC 99) → S.Curve (TRK 01 MIN 01 SEC 01) → F EQ measurement setting (TRK 02 MIN 02 SEC 02)

*3) F.Offset Display → RF.Offset Display → T.Offset Display

*4) 1TR/32TR/100TR

*5) Single TR → 32TR → 100TR → CRG Move
9x(8x) : 91(81) 92(82) 93(83) 94(84)

*6) Only at the time of CRG Move or 100TR Jump

*7) TRK/MIN/SEC → F.AGC → T.AGC Gain → F.bias → RF AGC

*8) CRG motor voltage = 2[V]

[Key]	Operation Test Mode
[BAND]	Power On / Off
[→]	CRG + / TR Jump + (Direction of the external surface)
[←]	CRG - / TR Jump - (Direction of the internal surface)
[1]	CLS and AGC and Applicable servomechanism / AGC, AGC display switching
[2]	RF Gain switching / Offset adjustment display / T.Balance adjustment / T.Open
[3]	Close, S.Curve / Rough Servo and RF AGC / F, T, RF AGC
-	SPDL 1X / 2X switching (Double-speed compatibility only)
-	Gop measurement
[6]	Forcus Mode switching / Tracking Close / CRG, TR Jump switching

6.2 CHECKING THE GRATING AFTER CHANGING THE PICKUP UNIT

• **Note :**
The grating angle of the PU unit cannot be adjusted after the PU unit is changed. The PU unit in the CD mechanism module is adjusted on the production line to match the CD mechanism module and is thus the best adjusted PU unit for the CD mechanism module. Changing the PU unit is thus best considered as a last resort. However, if the PU unit must be changed, the grating should be checked using the procedure below.

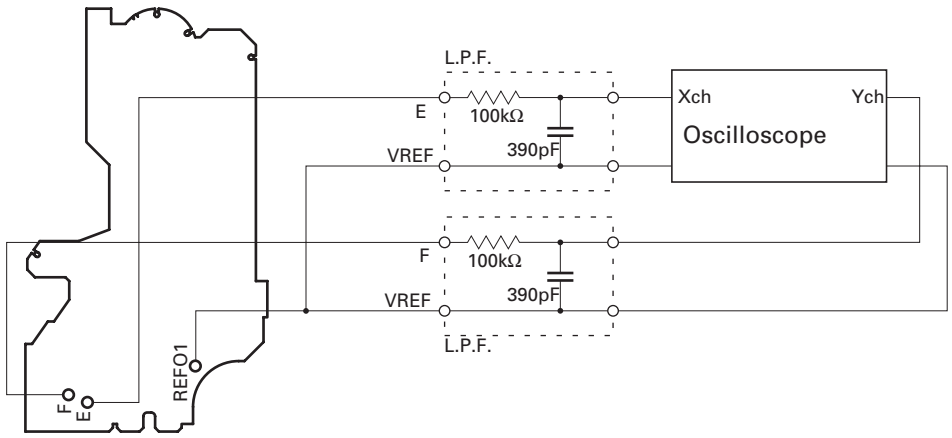
• **Purpose :**
To check that the grating is within an acceptable range when the PU unit is changed.

• **Symptoms of Mal-adjustment :**
If the grating is off by a large amount symptoms such as being unable to close tracking, being unable to perform track search operations, or taking a long time for track searching.

• **Method :**

• Measuring Equipment	• Oscilloscope, Two L.P.F.
• Measuring Points	• E, F, REFO1
• Disc	• ABEX TCD-782
• Mode	• TEST MODE

CD CORE UNIT(S10)



• **Checking Procedure**
1. In test mode, load the disc and switch the 3V regulator on.
2. Using the → and ← buttons, move the PU unit to the innermost track.
3. Press key 3 to close focus, the display should read "91". Press key 2 to implement the tracking balance adjustment the display should now read "81". Press key 3. The display will change, returning to "81" on the fourth press.
4. As shown in the diagram above, monitor the LPF outputs using the oscilloscope and check that the phase difference is within 75° . Refer to the photographs supplied to determine the phase angle.
5. If the phase difference is determined to be greater than 75° try changing the PU unit to see if there is any improvement. If, after trying this a number of times, the grating angle does not become less than 75° then the mechanism should be judged to be at fault.

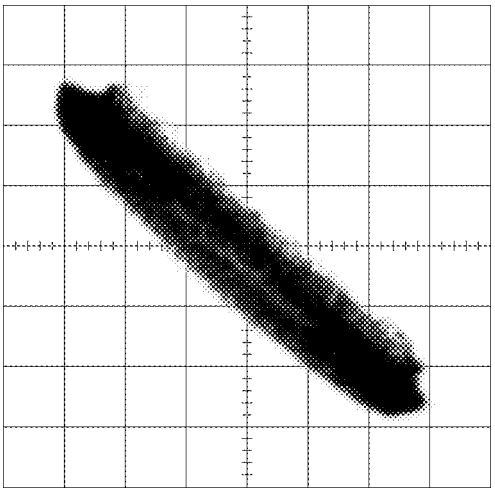
• **Note**
Because of eccentricity in the disc and a slight misalignment of the clamping center the grating waveform may be seen to "wobble" (the phase difference changes as the disc rotates). The angle specified above indicates the average angle.

• **Hint**
Reloading the disc changes the clamp position and may decrease the "wobble".

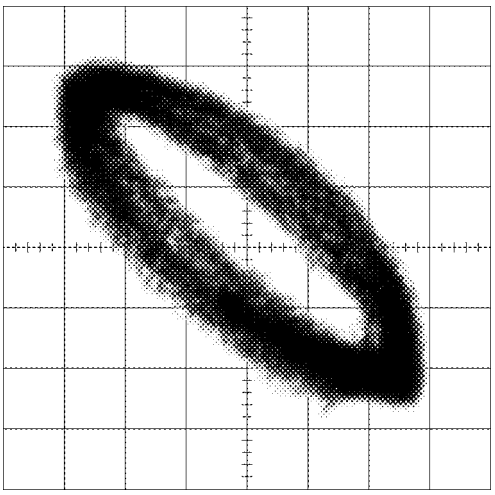
Grating waveform

Ech → Xch 20mV/div, AC
Fch → Ych 20mV/div, AC

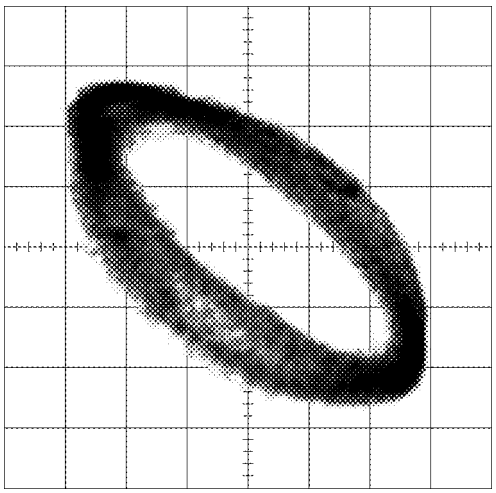
0°



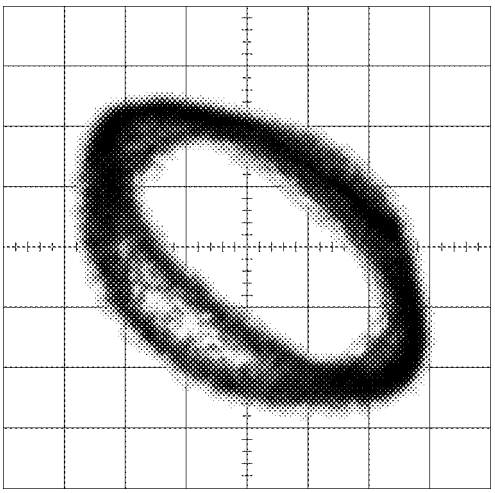
30°



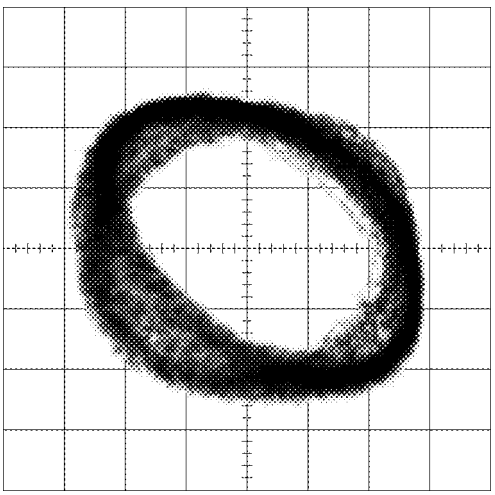
45°



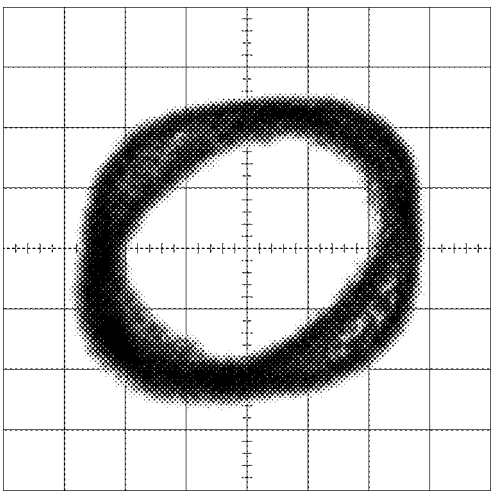
60°



75°



90°



6.3 ERROR MODE

● Error Messages

If a CD is not operative or stopped during operation due to an error, the error mode is turned on and cause(s) of the error is indicated with a corresponding number. This arrangement is intended at reducing nonsense calls from the users and also for facilitating trouble analysis and repair work in servicing.

(1) Basic Indication Method

1) When SERRORM is selected for the CSMOD (CD mode area for the system), error codes are written to DMIN (minutes display area) and DSEC (seconds display area). The same data is written to DMIN and DSEC. DTNO remains in blank as before.

2) Head unit display examples

Depending on display capability of LCD used, display will vary as shown below. xx contains the error number.

8-digit display	6-digit display	4-digit display
ERROR–xx	ERR–xx	E–xx

(2) Error Code List

Code	Class	Displayed error code	Description of the code and potential cause(s)
10	Electricity	Carriage Home NG SERVO LSI Communication Error	CRG can't be moved to inner diameter. CRG can't be moved from inner diameter. → Failure on home switch or CRG move mechanism. Communication error between microcomputer and SERVO LSI.
11	Electricity	Focus Servo NG	Focusing not available. → Stains on rear side of disc or excessive vibrations on REWRITABLE.
12	Electricity	Spindle Lock NG Subcode NG	Spindle not locked. Sub-code is strange (not readable). → Failure on spindle, stains or damages on disc, or excessive vibrations. A disc not containing CD-R data is found. Turned over disc are found, though rarely. CD signal error.
17	Electricity	Setup NG	AGC protection doesn't work. Focus can be easily lost. → Damages or stains on disc, or excessive vibrations on REWRITABLE.
30	Electricity	Search Time Out	Failed to reach target address. → CRG tracking error or damages on disc.
44	Electricity	ALL Skip	Skip setting for all track. (CD-R/RW)
50	Mechanism	CD On Mech Error	Mechanical error during CD ON. → Defective loading motor, mechanical lock and mechanical sensor.
A0	System	Power Supply NG	Power (VD) is ground faulted. → Failure on SW transistor or power supply (failure on connector).

Remarks: Mechanical errors are not displayed (because a CD is turned off in these errors).

Unreadable TOC does not constitute an error. An intended operation continues in this case.

Upper digits of an error code are subdivided as shown below:

1x: Setup relevant errors, 3x: Search relevant errors, Ax: Other errors.

6.4 SYSTEM MICROCOMPUTER TEST PROGRAM

● PCL output

In the normal operation mode (with the detachable panel installed, the ACC switched ON, the standby mode cancelled), shift the TESTIN (Pin 5) terminal to H.
The clock signal is output from the PCL terminal (Pin 62).
The frequency of the clock signal is 786.432kHz that is one 4th of the fundamental frequency.
The clock signal should be 786.432kHz ± 32Hz.
If the clock signal is out of the range, the X'tal (X601) should be replaced with new one.

7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 DISASSEMBLY

● **Removing the Case (not shown)**

1. Remove the Case.

● **Removing the CD Mechanism Module (Fig.1)**

1 Remove the four screws.

Disconnect the connector and then remove the CD Mechanism Module.

● **Removing the Grille Assy (Fig.1)**

2 Remove the two screws and then remove the Grille Assy.

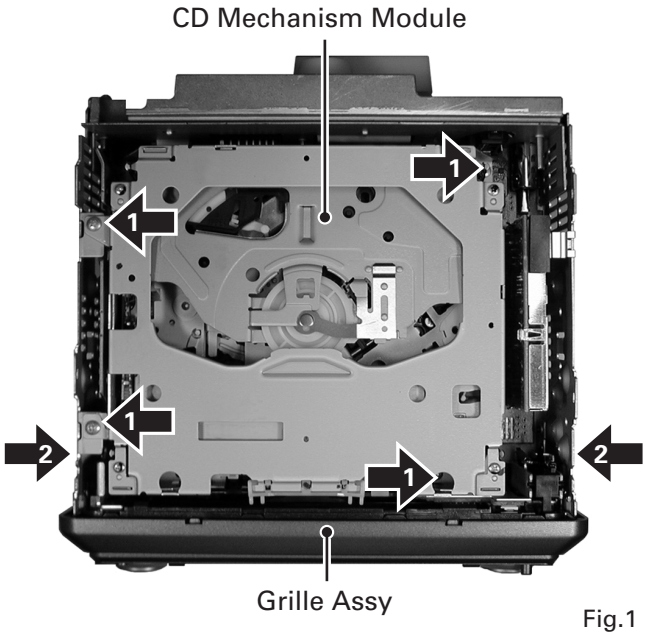


Fig.1

● **Removing the Tuner Amp Unit (Fig.2)**

1 Remove the screw and then remove the Holder.

2 Remove the three screws.

3 Remove the screw.

4 Straighten the tabs at three locations indicated.

5 Remove the screw and then remove the Tuner Amp Unit.

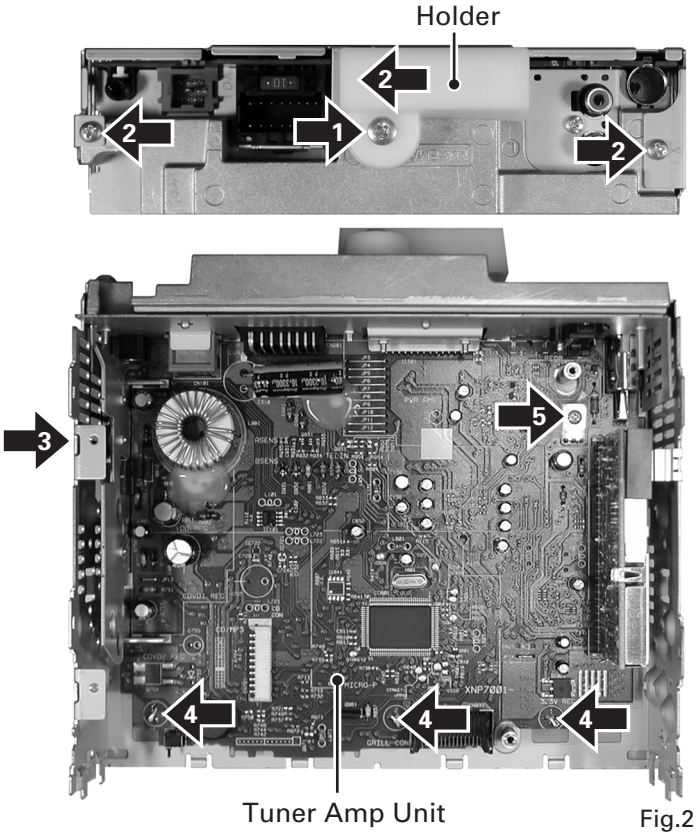
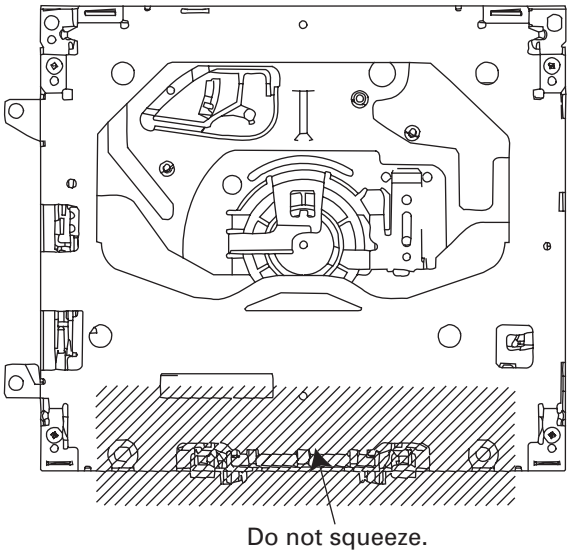


Fig.2

● How to hold the Mechanism Unit

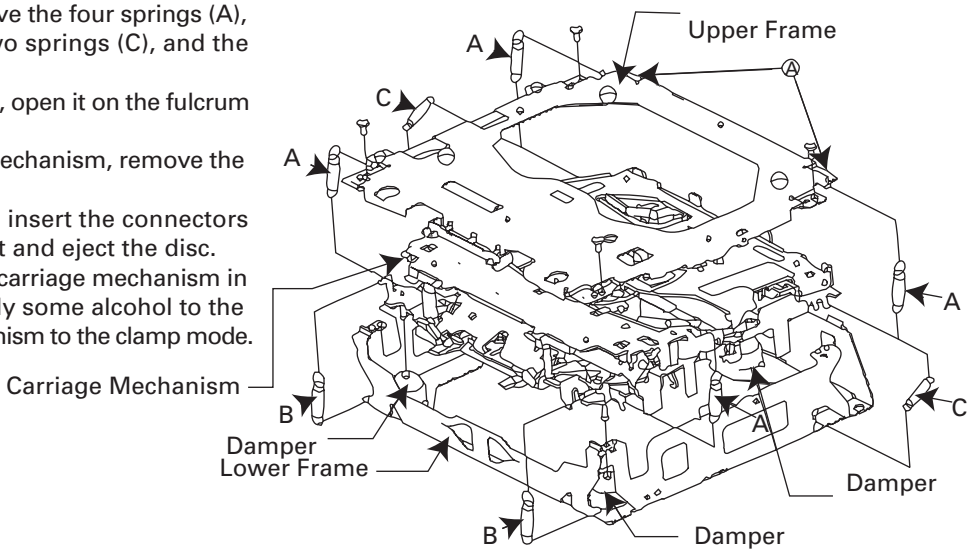
1. Hold the top and bottom frame.
2. Do not squeeze top frame's front portion too tight, because it is fragile.



● Removing the Upper and Lower Frames

1. With a disc clamped, remove the four springs (A), the two springs (B), the two springs (C), and the four screws.
2. To remove the upper frame, open it on the fulcrum A.
3. While lifting the carriage mechanism, remove the three dampers.
4. With the frames removed, insert the connectors coming from the main unit and eject the disc.

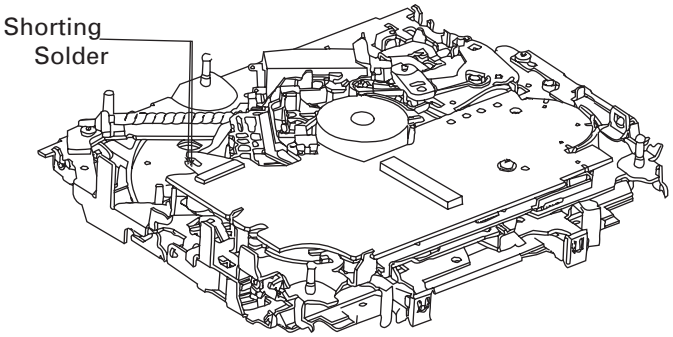
Caution: Before installing the carriage mechanism in the frames, be sure to apply some alcohol to the dampers and set the mechanism to the clamp mode.

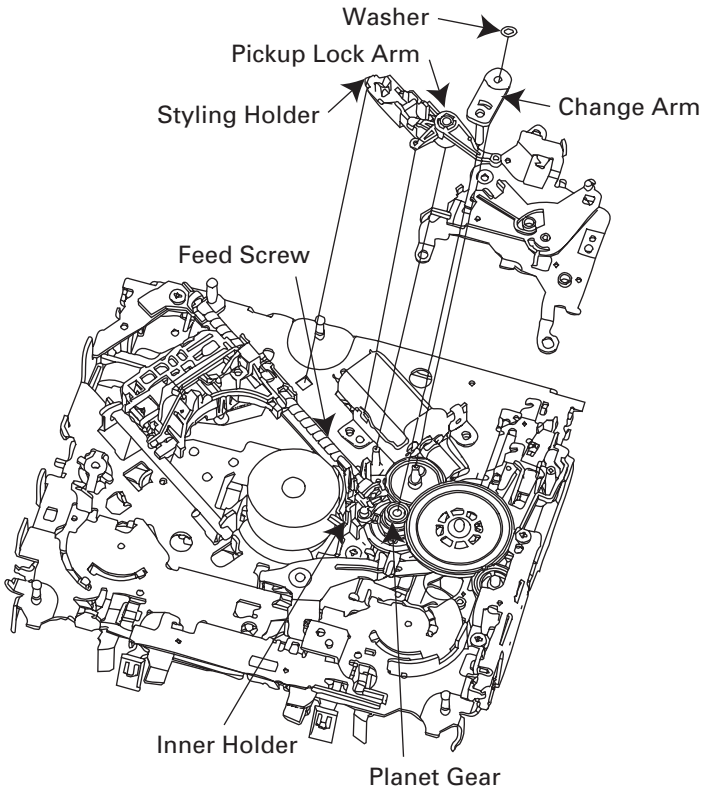


● Removing the Pickup Unit

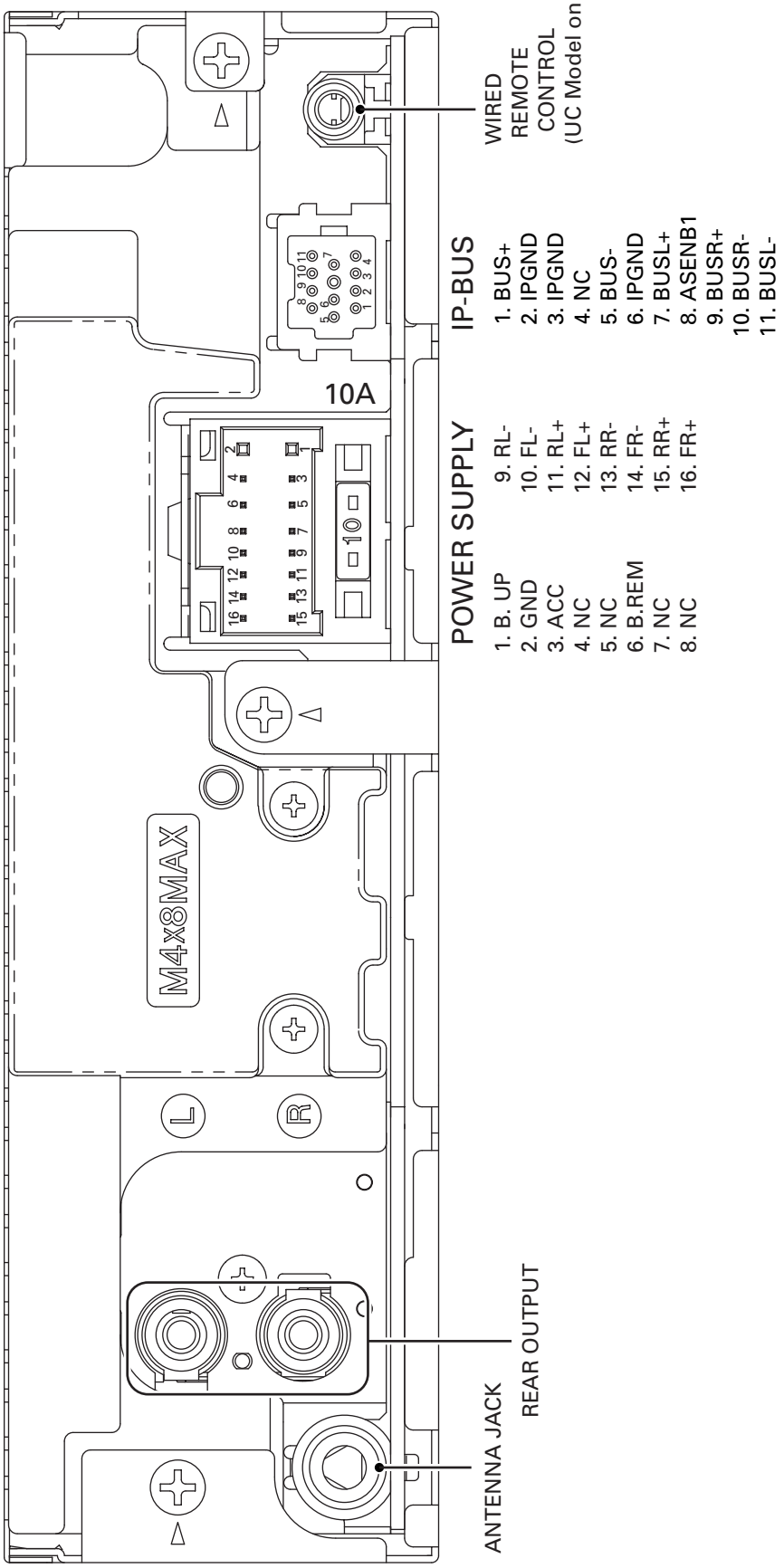
1. Apply shorting solder to the Pickup flexible cable. Disconnect the cable.
2. Set the mechanism to the clamp mode.
3. Remove the lead wires from the inner holder.
4. Remove the washer, styling holder, change arm, and pickup lock arm.
5. While releasing from the hook of the inner holder, lift the end of the feed screw.

Caution: In assembling, move the planet gear to the load/eject position before setting the feed screw in the inner holder.





7.1.2 CONNECTOR FUNCTION DESCRIPTION



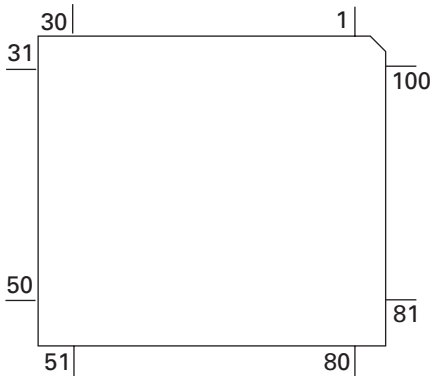
7.2 PARTS
7.2.1 IC

● **Pin Functions(PE5405A)**

Pin No.	Pin Name	I/O	Format	Function and Operation
1	$\overline{\text{SWVDD}}$	O	C	Grille : Chip enable output
2-4	NC			Not used
5	TESTIN	I		Test program mode input
6	LCDPW			Not used
7	TELIN	I		Telephone mute input
8	$\overline{\text{EJECTIN}}$	I		Eject sense input
9	FLPILM	O	C	Flap illumination output
10	DALMON	O	C	For consumption low-current output
11	$\overline{\text{RESET}}$	I		Reset input
12	XT2			Not used
13	XT1	I		Clock connection pin
14	VSS			GND
15	X2			Crystal oscillator connection pin
16	X1	I		Crystal oscillator connection pin
17	REGOFF			Regulator operation specification signal
18	REGC			Capacitor for regulator connect pin
19	VDD			Power supply
20	ILMPW	O	C	Illumination power supply control output
21	SYSPW	O	C	System power control output
22	$\overline{\text{ADPW}}$	O	C	A/D converter power supply control output
23	NC			Not used
24	IPPW	O	C	Power supply control output for IP BUS interface IC
25	NC			Not used
26	ROMDATA	O	C	ROM correction data output
27	ROMCLK			Not used
28	ROMCS			Not used
29-31	NC			Not used
32	$\overline{\text{TUNPCE2}}$	O	C	PLL chip enable output2
33	VST	O	C	E.VOL : Strobe output
34	VCK	O	C	E.VOL : Clock output
35	VDT	O	C	E.VOL : Data output
36	ANTPW			Not used
37	MUTE	O	C	System mute output
38, 39	NC			Not used
40	VSS			GND
41	VDD			Power supply
42	RDS57K			Not used
43	$\overline{\text{DRST}}$			Not used
44	$\overline{\text{RDSLK}}$			Not used
45	RDT			Not used
46	DORAON			Not used
47	NC			Not used
48	CSENSOUT	O	C	CSENS state output
49-55	NC			Not used
56,57	ROT1,0	I		Rotary encoder pulse input 1,0
58	STRKEY2	O	C	Steering remote controller output
59	CDLOEJ	O	C	CD : Load Moter Load/Eject output
60	CLCONT	O	C	CD : Driver input switch output
61	CONT	O	C	CD : Servo driver power supply control output
62	PCL	O	C	Clock adjustment output
63	CLAMPSW	I		Clamp SW input
64	VDCONT	O	C	CD : VD power control output
65	$\overline{\text{XSCK}}$	O	C	CD LSI clock output
66	XSI	I		CD LSI data input
67	XSO	O	C	CD LSI data output
68	XAO	O	C	CD LSI command/data control output
69	$\overline{\text{XRST}}$	O	C	CD LSI reset control output
70	$\overline{\text{XSTB}}$	O	C	CD LSI strobe output

Pin No.	Pin Name	I/O	Format	Function and Operation
71	ASENSBO	O	C	IP-BUS : Slave power supply control output
72	EMUTE			Not used
73	TEST	I		GND
74	SL	I		TUNER : Signal level input
75	STRKEY1	I		Steering remote controller input
76	MODELIN			Not used
77	CSENS	I		Flap close sense input
78	NC			Not used
79	DSCSNS	I		CD : Disc insert sense input
80	VDSENS	I		CD : VD voltage sense input
81	TEMP	I		CD : Temperature sense input
82	AVDD			A/D converter power supply terminal
83	AVREF			A/D converter reference voltage terminal
84	AVSS			GND
85	RX	I		IP-BUS : Data input
86	TX	O	C	IP-BUS : Data output
87	NMI			GND
88	$\overline{\text{LDET}}$	I		PLL lock sense input
89	$\overline{\text{RCK}}$	I		RDS : Clock input
90	$\overline{\text{DSENS}}$	I		Grille detach sense input
91	PACK	I		PACK input
92	$\overline{\text{ASENS}}$	I		ACC power sense input
93	$\overline{\text{BSENS}}$	I		Back up power sense input
94	TUNPDI	I		PLL IC data input
95	KYDT	I		Grille data input
96	DPDT	O	C	Grille data output
97	TUNPCK	O	C	PLL clock output
98	TUNPDO	O	C	PLL data output
99	TUNPCE	O	C	PLL chip enable output
100	PEE	O	C	Beep tone output

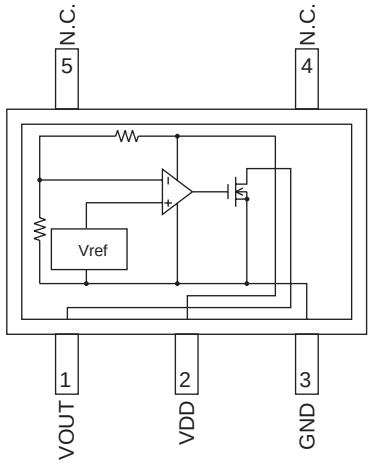
* PE5405A



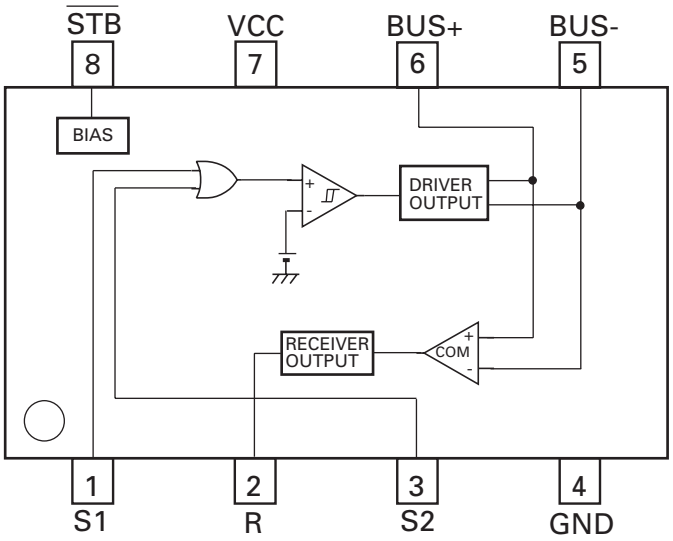
IC's marked by * are MOS type.
Be careful in handling them because they are very liable to be damaged by electrostatic induction.

Format	Meaning
C	CMOS

BD4834G



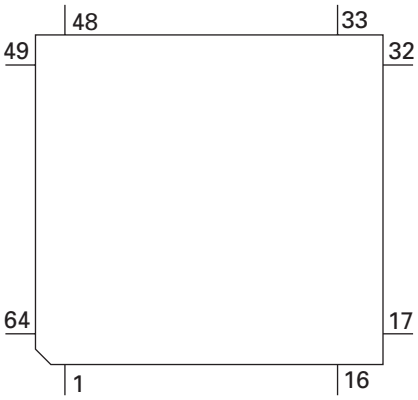
HA12240FP



● Pin Functions (PD6340A)

Pin No.	Pin Name	I/O	Function and Operation
1-5	SEG4-0	O	LCD segment output
6-9	COM3-0	O	LCD common output
10	VLCD		LCD drive power supply
11-14	KST3-0	O	Key strobe output
15,16	KDT0,1	I	Key data input (analogue input)
17	REM	I	Remote control reception input
18	DPDT	I	Display data input
19	NC		Not used
20	KYDT	O	Key data output
21	MODA		GND
22	XO		Crystal oscillator connection pin
23	XI		Crystal oscillator connection pin
24	VSS		GND
25,26	KDT2,3	I	Key data input
27,28	KST5,4	O	Key strobe output
29-55	SEG39-13	O	LCD segment output
56	VDD		Power supply
57-64	SEG12-5	O	LCD segment output

* PD6340A

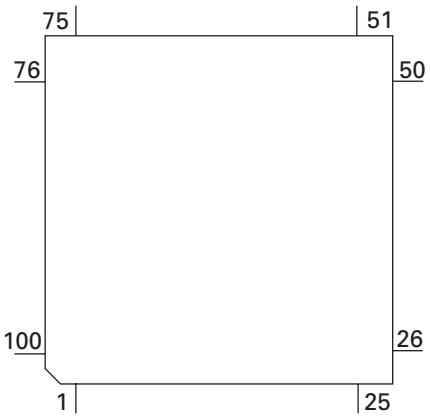


● Pin Functions(UPD63712AGC)

Pin No.	Pin Name	I/O	Function and Operation
1	LD	O	Output of LD
2	PD	I	Input of PD
3	PN	I	Assignment of pickup polarity
4	AVDD		Power supply for the analog system
5	DGND		Ground for digital circuits
6	RFOK	O	Output of RFOK
7	INTQ	O	Interruption signals to the external microcomputer
8	$\overline{\text{RST}}$	I	Input of reset
9	A0	I	Command/Parameter discrimination signal input
10	$\overline{\text{STB}}$	I	Data strobe signal input
11	$\overline{\text{SCK}}$	I	Serial data clock input
12	SO	O	Serial data output
13	SI	I	Serial data input
14	DVDD		Power supply for digital circuits
15	DAVDD		Power supply for DAC
16	ROUT	O	Output of audio for the right channel
17	DAGND		GND for DAC
18	REGC		Connected to the capacitor for band gap
19	DAGND		GND for DAC
20	LOUT	O	Output of audio for the left channel
21	DAVDD		Power supply for DAC
22	XVDD		Power supply for the crystal oscillator
23	$\overline{\text{XTAL}}$	O	Connected to the crystal oscillator
24	XTAL	I	Connected to the crystal oscillator
25	XGND		Ground for the crystal oscillator
26	DVDD		Power supply for digital circuits
27	C1D1	O	Information on error correction
28	C1D2	O	Information on error correction
29	C2D1	O	Information on error correction
30	C2D2	O	Information on error correction
31	C2D3	O	Information on error correction
32	LOCK	O	Output of LOCK
33	MIRR	O	MIRR signal
34	HOLD	O	HOLD signal
35	PLCK	O	Output of PLCK
36	C16M	O	Output of 16.9344MHz
37	DGND		Ground for digital circuits
38	TX	O	DAI output
39	EMPH	O	Pre-emphasis information output
40	FLAG	O	The flag for which output sound data cannot be corrected is outputted
41	DVDD		Power supply for digital circuits
42	LIMIT	I	Signal is inputted when the register can be read
43	$\overline{\text{XTALEN}}$	I	Permission to oscillate
44	DGND		Ground for digital circuits
45	DIN	I	Input of audio data
46	DOUT	O	Output of audio data
47	SCKIN	I	Clock input for audio data
48	SCKO	O	Clock output for audio data
49	LRCKIN	I	Input of LRCK for audio data
50	LRCK	O	Output LRCK for audio data
51	DVDD		Power supply for digital circuits
52	FD+	O	Output of focus drive PWM
53	FD-	O	Output of focus drive PWM
54	TD+	O	Output of tracking drive PWM
55	TD-	O	Output of tracking drive PWM
56	SD+	O	Output of thread drive PWM
57	SD-	O	Output of thread drive PWM
58	MD+	O	Output of spindle drive PWM
59	MD-	O	Output of spindle drive PWM
60	DGND		Ground for digital circuits

Pin No.	Pin Name	I/O	Function and Operation
61	TESTEN	I	Connected to GND
62-66	TEST4-0	I	Connected to GND
67	ADGND		GND for DAC
68	EFM	O	Output of EFM signals
69	ASY	I	Input of asymmetry
70	ADVDD		Power supply for DAC
71	RFI	I	Input of RF
72, 73	EQ2, 1		Equalizer 2, 1
74	RF-	I	Reversal input of RF
75	RF2-	I	Reversal input of RF2
76	AGCO	O	Output of RF
77	AGCI	I	Input of AGC
78	RFO	O	Output of RF
79	ATEST	O	Analog tests
80	C3T		Connection to the capacitor for detecting 3T
81	AGND		Ground for the analog system
82	A	I	Input of A
83	C	I	Input of C
84	B	I	Input of B
85	D	I	Input of D
86	F	I	Input of F
87	E	I	Input of E
88	VREFIN	I	Photo-detector input bias voltage
89	AVDD		Power supply for the analog system
90	REFOUT	O	Output of reference voltage
91	REFC		Connected to the capacitor for output of REFOUT
92	FE-	I	Reversal input of FE
93	FEO	O	Output of FE
94	ADCIN	I	TEST
95	TE-	I	Reversal input of TE
96	TEO	O	Output of TE
97	TE2	O	TE2
98	TEC	I	TEC
99	AGND		Ground for the analog system
100	PWMSW	I	Servo PWM mode switching

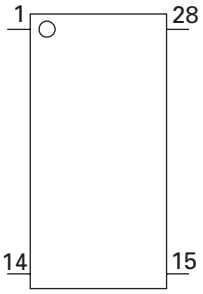
* UPD63712AGC



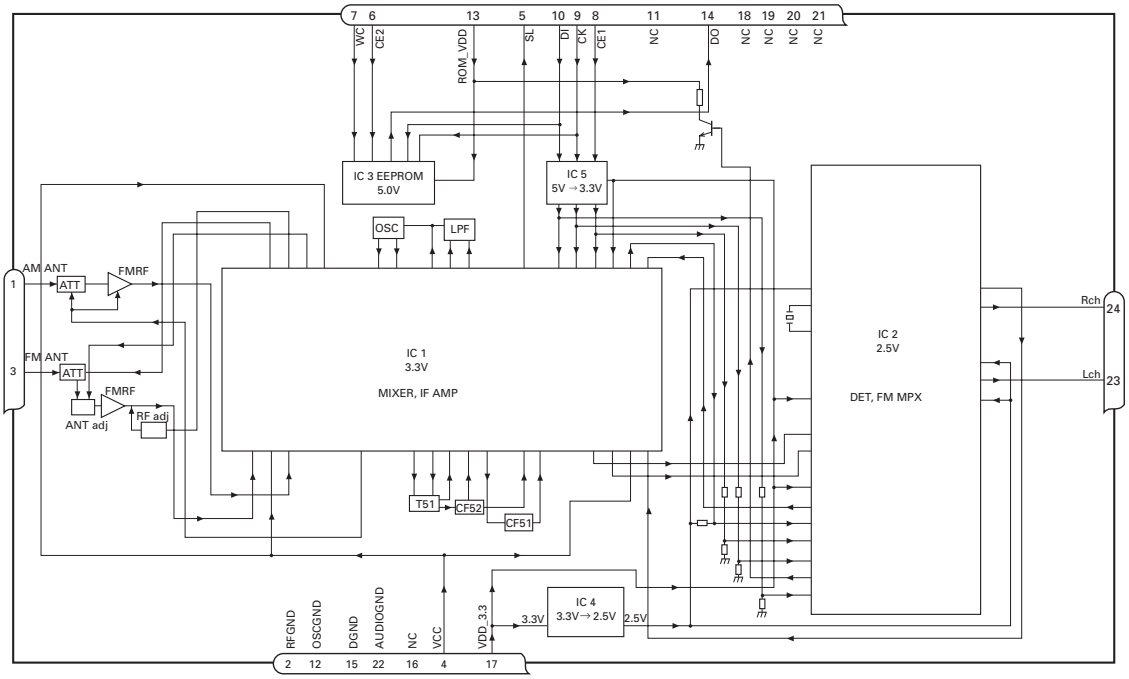
● Pin Functions(BA5835FP)

Pin No.	Pin Name	Function and Operation
1	VR	Input pin for reference voltage
2	OPIN2(+)	Input pin for non-inverting input for CH2 preamplifier
3	OPIN2(-)	Input pin for inverting input for CH2 preamplifier
4	OPOUT2	Output pin for CH2 preamplifier
5	OPIN1(+)	Input pin for non-inverting input for CH1 preamplifier
6	OPIN1(-)	Input pin for inverting input from CH1 preamplifier
7	OPOUT1	Output pin for CH1 preamplifier
8	GND	Ground pin
9	MUTE	Mute control pin
10	POWVCC1	Power supply pin for CH1, CH2, and CH3 at "Power" stage
11	VO1(-)	Driver CH1 - Negative output
12	VO1(+)	Driver CH2 - Positive output
13	VO2(-)	Driver CH2 - Negative output
14	VO2(+)	Driver CH2 - Positive output
15	VO3(+)	Driver CH2 - Positive output
16	VO3(-)	Driver CH2 - Negative output
17	VO4(+)	Driver CH4 - Positive output
18	VO4(-)	Driver CH4 - Negative output
19	POWVCC2	Power supply pin for CH4 at "Power" stage
20	GND	Ground pin
21	CNT	Control pin
22	LDIN	Loading input
23	OPOUTSL	Output pin for preamplifier for thread
24	OPINLSL	Input pin for preamplifier for thread
25	OPOUT3	CH3 preamplifier output pin
26	OPIN3(-)	Input pin for inverting input for CH3 preamplifier
27	OPIN3(+)	Input pin for non-inverting input for CH3 preamplifier
28	PREVCC	PreVcc

BA5835FP



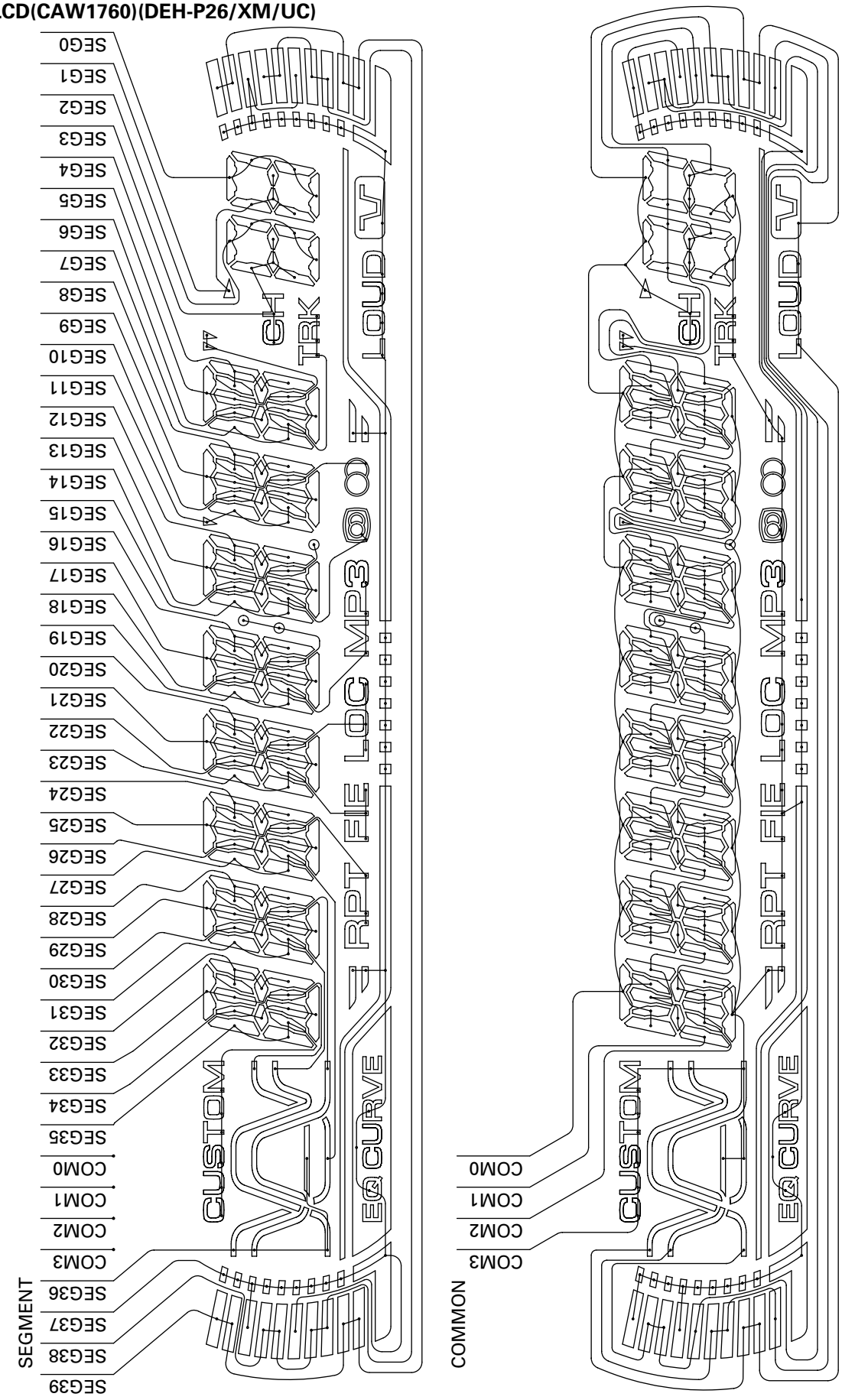
● FM/AM Tuner Unit



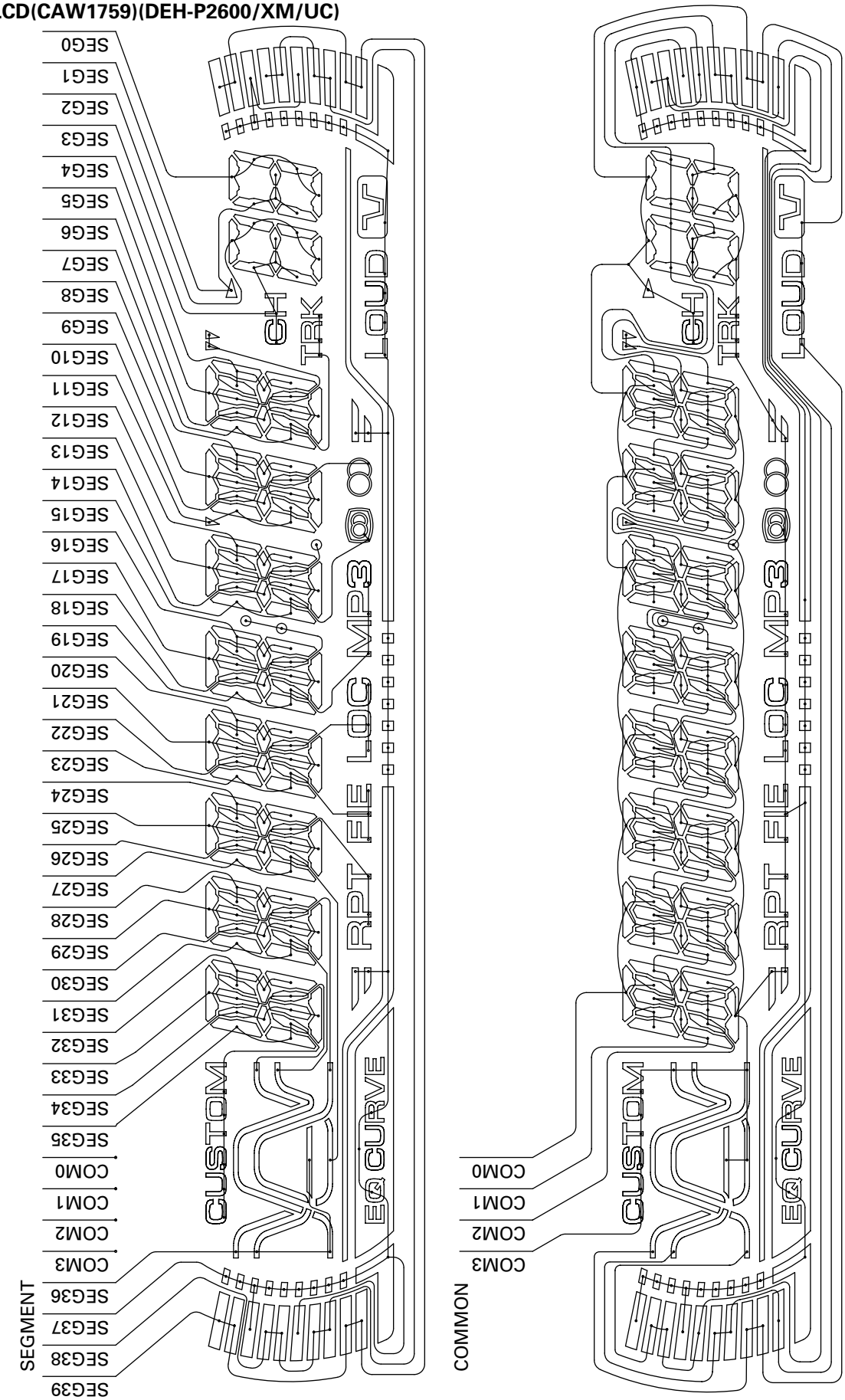
No.	Symbol	I/O	Explain	
1	AMANT	I	AM antenna input	AM antenna input high impedance AMANT pin is connected with an all antenna by way of 4.7μH. (LAU type inductor) A series circuit including an inductor and a resistor is connected with RF ground for the countermeasure against the hum of power transmission line.
2	RFGND		RF ground	Ground of antenna block
3	FMANT	I	FM antenna input	Input of FM antenna 75Ω Surge absorber(DSP-201M-S00B) is necessary.
4	VCC		power supply	The power supply for analog block. D.C 8.4V ± 0.3V
5	SL	O	signal level	Output of FM/AM signals level
6	CE2	I	chip enable-2	Chip enable for EEPROM "Low" active
7	WC	I	write control	You can write EEPROM, when EEPROM write control is "Low". Ordinary non connection
8	CE1	I	chip enable-1	Chip enable for AF•RF "High" active
9	CK	I	clock	Clock
10	DI	I	data in	Data input
11	NC		non connection	Not used
12	OSCGND		osc ground	Ground of oscillator block
13	ROM_VDD		power supply	Power supply for EEPROM pin 13 is connected with a power supply of micro computer.
14	DO	O	data out	Data output
15	DGND		digital ground	Ground of digital block
16	NC		non connection	Not used
17	VDD_3.3		power supply	The power supply for digital block. 3.3V ± 0.2V
18	NC		non connection	Not used
19	NC		non connection	Not used
20	NC		non connection	Not used
21	NC		non connection	Not used
22	AUDIOGND		audio ground	Ground of audio block
23	L ch	O	L channel output	FM stereo "L-ch" signal output or AM audio output
24	R ch	O	R channel output	FM stereo "R-ch" signal output or AM audio output

7.2.2 DISPLAY

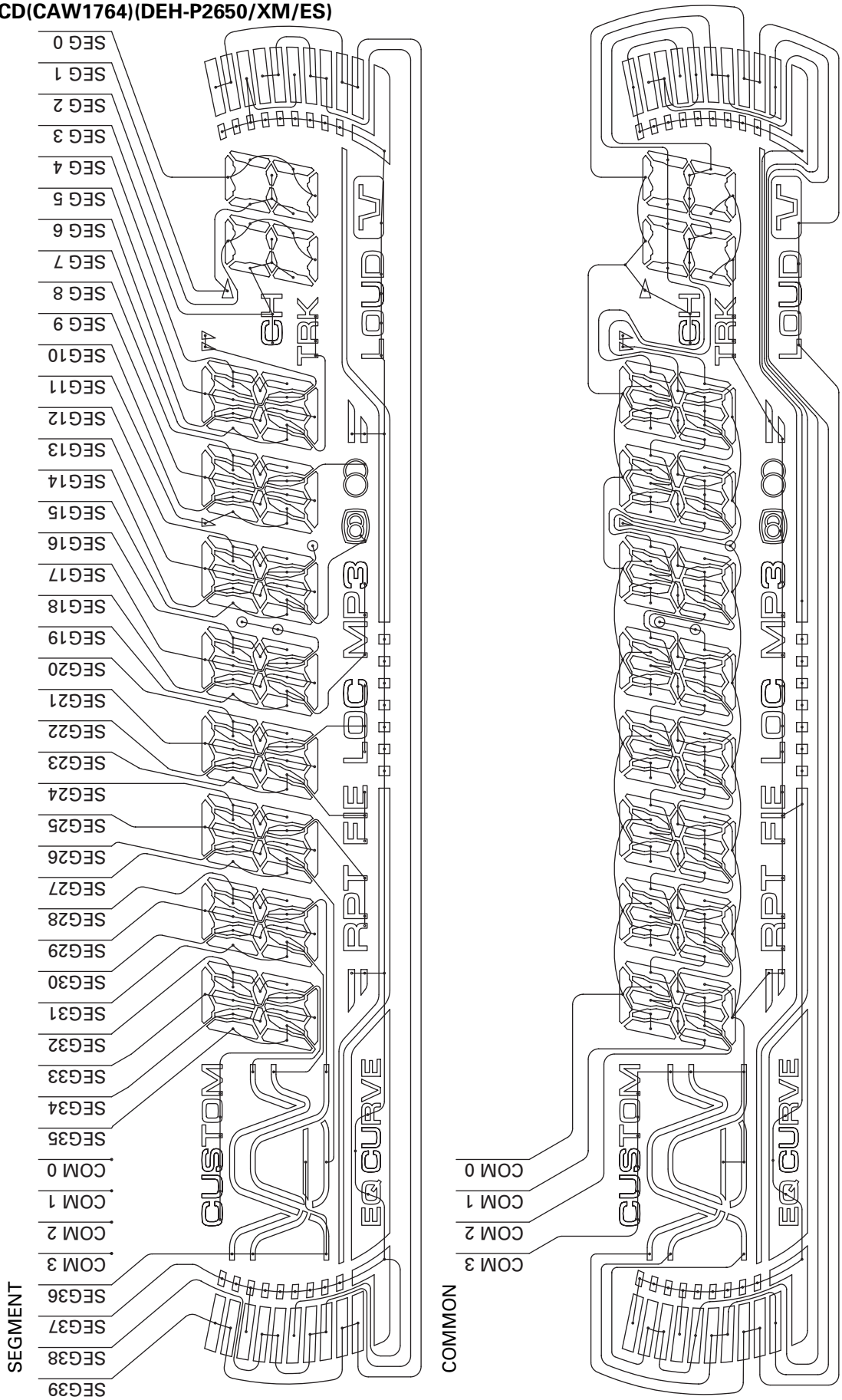
● **LCD(CAW1760)(DEH-P26/XM/UC)**



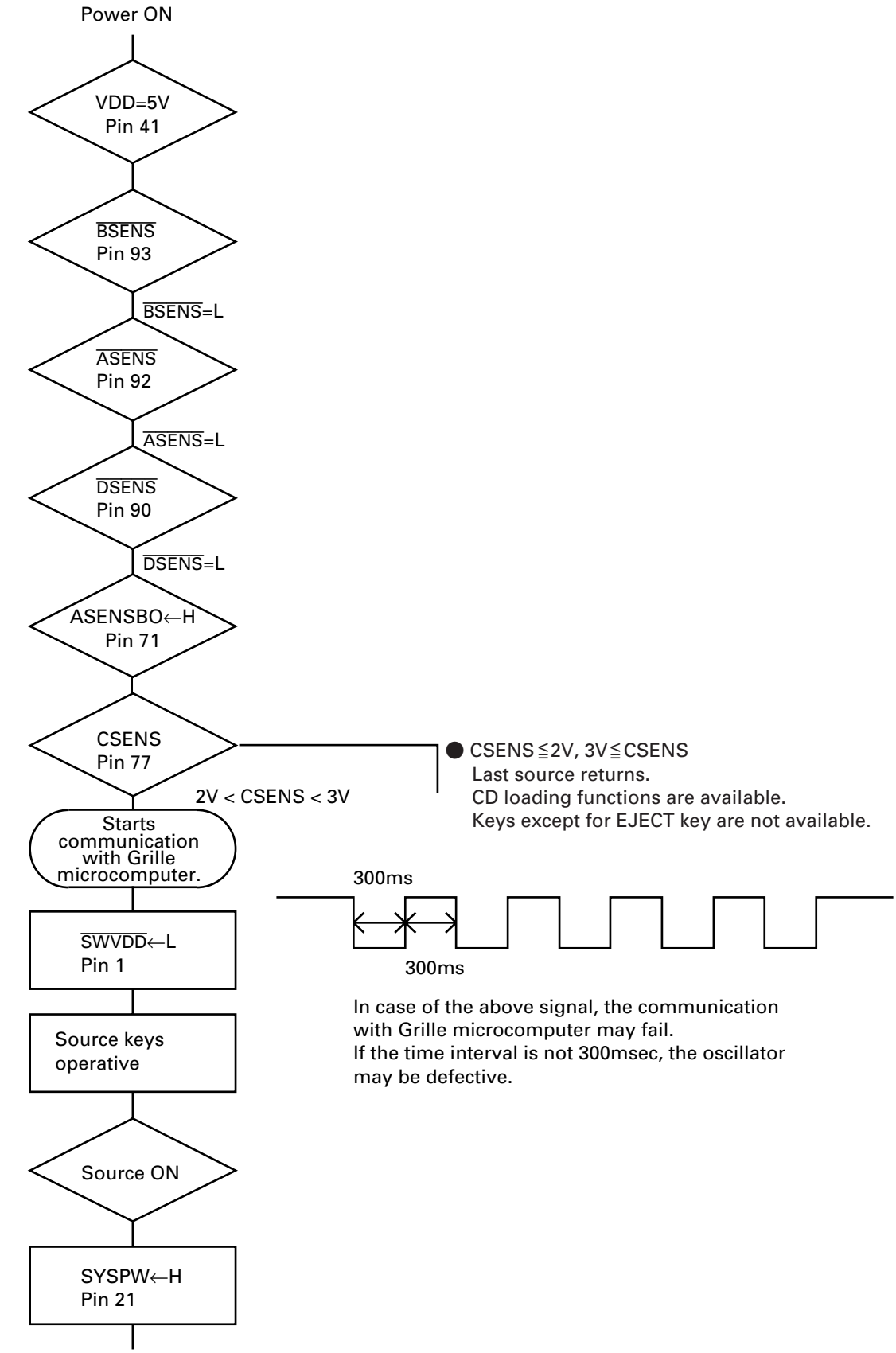
● LCD(CAW1759)(DEH-P2600/XM/UC)



● **LCD(CAW1764)(DEH-P2650/XM/ES)**



7.3 OPERATIONAL FLOW CHART

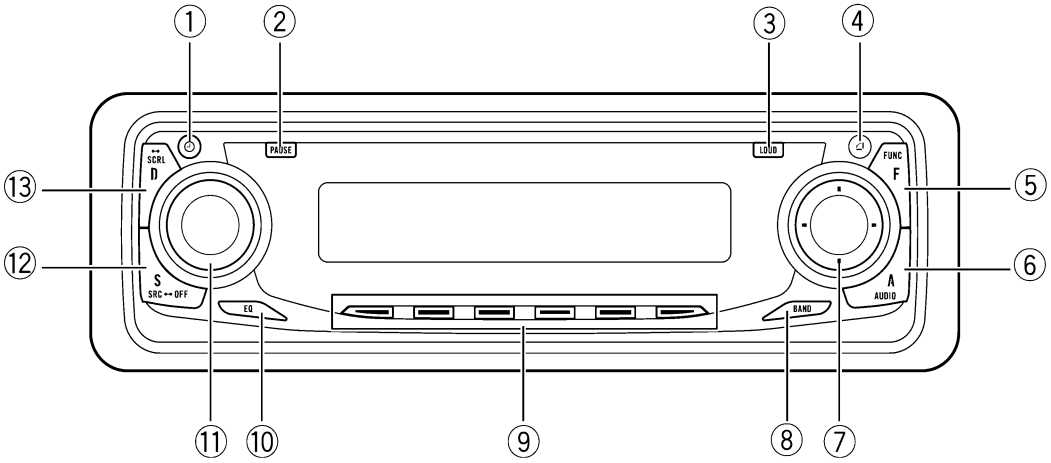


7.4 CLEANING

Before shipping out the product, be sure to clean the following portions by using the prescribed cleaning tools:

Portions to be cleaned	Cleaning tools
CD pickup lenses	Cleaning liquid : GEM1004 Cleaning paper : GED-008

8. OPERATIONS



Head unit

① **CLOCK button**
Press to change to the clock display.

② **PAUSE button**
Press to turn pause on or off.

③ **LOUDNESS button**
Press to turn loudness on or off.

④ **OPEN button**
Press to open the front panel.

⑤ **FUNCTION button**
Press to select functions.

⑥ **AUDIO button**
Press to select various sound quality controls.

⑦ **▲/▼/◄/► buttons**
Press to do manual seek tuning, fast forward, reverse and track search controls. Also used for controlling functions.

⑧ **BAND button**
Press to select among three FM and one AM bands and cancel the control mode of functions.

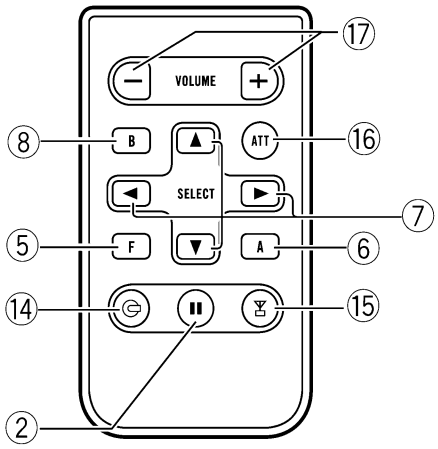
⑨ **1–6 buttons**
Press for preset tuning and disc number search when using a multi-CD player.

⑩ **EQ button**
Press to select various equalizer curves.

⑪ **VOLUME**
When you press **VOLUME**, it extends outward so that it becomes easier to turn. To retract **VOLUME**, press it again. Rotate to increase or decrease the volume.

⑫ **SOURCE button**
This unit is turned on by selecting a source. Press to cycle through all of the available sources.

⑬ **DISPLAY button**
Press to select different displays. ▣



Remote control

Operation is the same as when using the button on the head unit. See the explanation of the head unit about the operation of each button with the exception of **ATT**, which is explained below.

⑭ CD button

Press to select the built-in or multi-CD player as the source.

⑮ TUNER button

Press to select the tuner as the source.

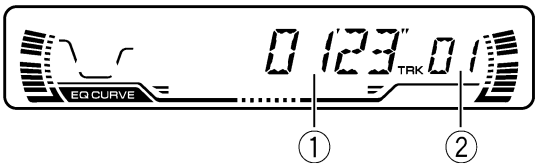
⑯ ATT button

Press to quickly lower the volume level, by about 90%. Press once more to return to the original volume level.

⑰ VOLUME button

Press to increase or decrease the volume.

Playing a CD



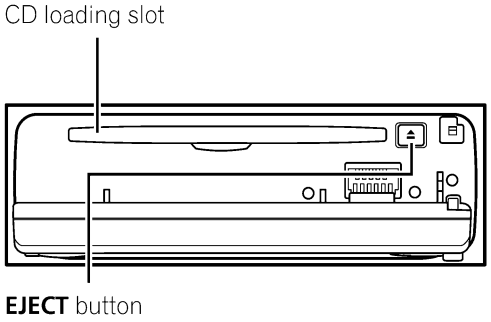
These are the basic steps necessary to play a CD with your built-in CD player. More advanced CD operation is explained starting on the next page.

① Play time indicator
Shows the elapsed playing time of the current track.

② Track number indicator
Shows the track currently playing.

1 Press OPEN to open the front panel.
CD loading slot appears.
- After a CD has been inserted, press **SOURCE** to select the built-in CD player.

2 Insert a CD into the CD loading slot.
Playback will automatically start.



- You can eject a CD by pressing **EJECT**.
- To avoid a malfunction, make sure that no metal object comes into contact with the terminals when the front panel is open.

3 Close the front panel.

4 Use VOLUME to adjust the sound level.
Rotate to increase or decrease the volume.

5 To perform fast forward or reverse, press and hold ◄ or ►.

6 To skip back or forward to another track, press ◄ or ►.
Pressing ► skips to the start of the next track. Pressing ◄ once skips to the start of the current track. Pressing again will skip to the previous track.

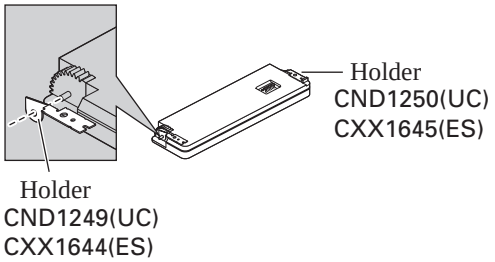
Notes

- The built-in CD player plays one, standard, 12-cm or 8-cm (single) CD at a time. Do not use an adapter when playing 8-cm CDs.
- Do not insert anything other than a CD into the CD loading slot.
- If you cannot insert a disc completely or if after you insert a disc the disc does not play, check that the label side of the disc is up. Press **EJECT** to eject the disc, and check the disc for damage before inserting the disc again.
- If the built-in CD player does not operate properly, an error message such as **ERROR-11** may be displayed.
- The built-in CD player is not equipped with CD TEXT function.
- A CD TEXT disc is a CD featuring recorded text information such as disc title, artist name and track title. ▣

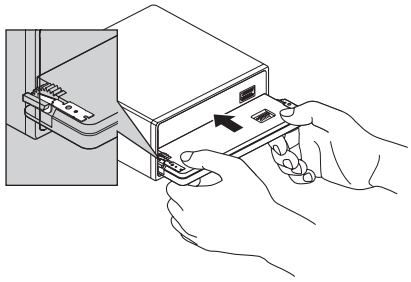
Fixing the Front Panel

If you do not operate the Detaching and Replacing the Front Panel Function, use the supplied fixing screws and fix the front panel to this unit.

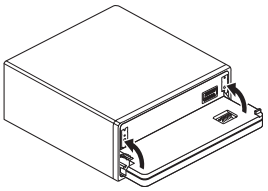
1. Attach the holders to both sides of the front panel.



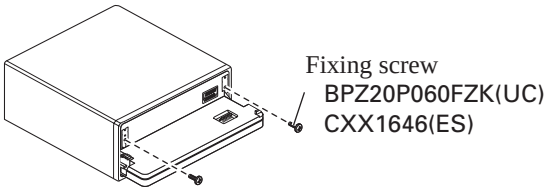
2. Replace the front panel to the unit.



3. Flip the holders into upright positions.



4. Fix the front panel to the unit using fixing screws.



● CONNECTION DIAGRAM